

**RURAL DENMARK**  
**AND ITS LESSONS**

# WORKS BY SIR RIDER HAGGARD.

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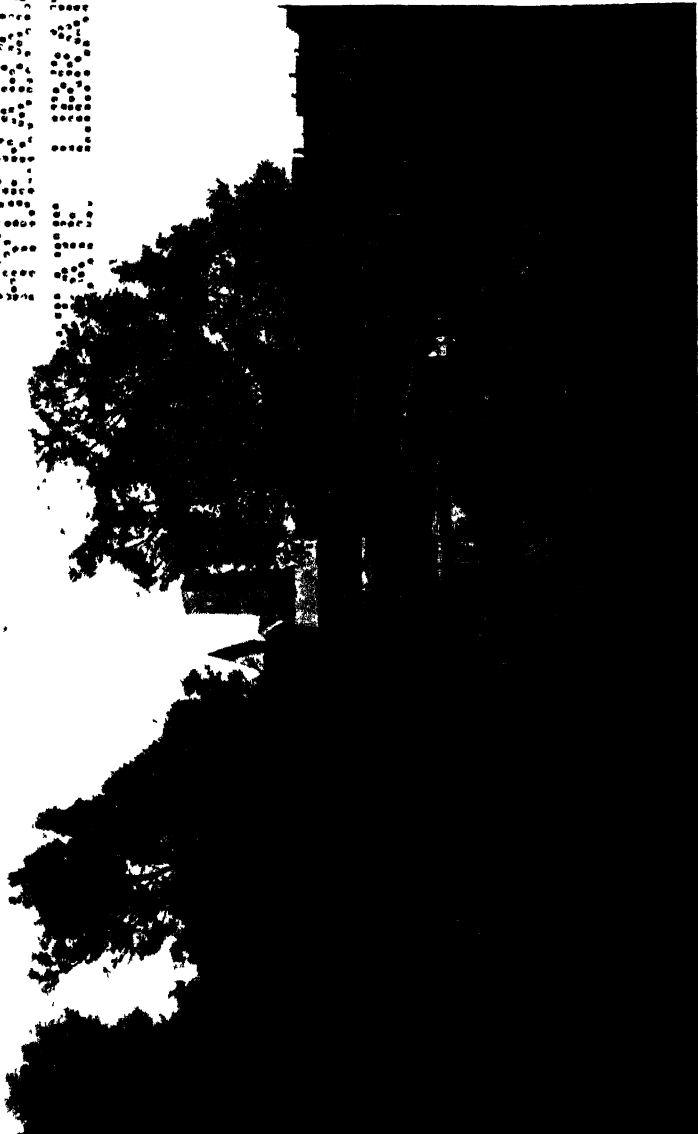
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THE WORLD'S DESIRE.

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RIBE

# RURAL DENMARK AND ITS LESSONS

BY

H. RIDER HAGGARD

*"Get wisdom, get understanding :  
Yea, with all thou hast gotten, thou shalt not know."*

WITH FRONTISPIECE.

*NEW IMPRESSION*

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*This book is dedicated to*  
*The Farmers of Denmark*

*in token of the admiration of a foreign agriculturist  
for the wisdom and brotherly understanding that  
have enabled them to triumph over the difficulties of  
soil, climate, and low prices, and, by the practice  
of general co-operation, to achieve individual  
and national success.*

DITCHINGHAM,  
March 1911.

## AUTHOR'S NOTE TO FIRST EDITION

IN collecting the material for this book its author followed the method of actually inspecting Danish farms of various sizes, and taking careful notes on the spot of what he saw and heard.

The results recorded in these pages may therefore be accepted as accurate to the best of his knowledge and belief. In the same way he interviewed personally the different authorities whose opinions he has quoted. As much of this work, however, was of necessity done by the help of an interpreter, it is possible that errors, consequent on misunderstandings, may have crept in here and there, and for such errors, if any, he apologises in advance. Further, the fact that all money standards, temperatures, weights, measures, &c., required rendering into their English equivalents, which are not always easy to arrive at, opens a door to possible mistakes. Lastly, some names may occasionally have been misspelt, although he has done his best to avoid such blunders.

He wishes to take this opportunity to tender his sincerest thanks to those Danish gentlemen who so kindly and unselfishly helped him in his task, such as, to mention a few out of many, His Excellency the Minister for Agriculture; Mr. Waage, Assistant in the Ministry of Agriculture, &c.; Mr. Knud Vallée, Secretary and Deputy in the Ministry of Agriculture; Mr. Rudolf Schou, *Conseiller du Gouvernement* of the

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Department for Agriculture; the Kammeherre Tesdorpf; Mr. Busck, the Director of the Copenhagen Milk-supply Company; Mr. Jerndorff Jessen; Mr. Peter Holm of Aarhus; and all the landowner and farmers who courteously furnished him with information.

Particularly are his thanks due to Mr. J. S. Jensen who was so good as to act as his secretary and interpreter during his stay in Denmark.

## AUTHOR'S NOTE TO NEW EDITION

IN the chapter of this work headed "What Might Be and What Is," I discussed the sales of English landed estates which were in progress at the time of its writing, intimating that, in my view, their importance was perhaps exaggerated. During the past year, however, owing to various causes already touched on in these pages, many more such sales have been announced. What proportion of them has been, or will be actually carried through is another matter, and one on which I have no information. At any rate, tenants have taken alarm, for the good reason that such a sale often means the termination of their tenancy, that is, unless it suits them to purchase the holdings they occupy. Owing to their representations a Departmental Committee on the Position of Sitting Tenants was appointed by the Government to consider the question, which committee returned a report that, whatever else it may have been, was not unanimous. Thereupon the Government introduced a Bill in the House of Lords, of which the sole provision is that when a landlord determines to sell his property the farmer holding on an annual tenancy can claim two years' notice instead of the single year to which he is entitled.

It is very difficult to understand how the tenant could benefit by such an alteration of the law, since after a short extra twelve months of grace he

would be called upon to quit. This must, on the other hand, operate to the disadvantage of the seller, the value of whose property would be decreased, for the good reason that he could not give immediate possession to the purchaser. Surely the real solution of the problem is that which, in common with many others, I have urged in this book and elsewhere; namely, that tenants should be assisted to purchase their holdings, with money borrowed either from the State direct or from a land bank which is controlled and supported by the State. It is earnestly to be hoped, moreover, that whatever Government is finally called upon to deal with these great questions will come to the conclusion that, in the interest of the nation as a whole, this is no time to further depreciate the value of British agricultural land by the imposition of conditions which will add difficulties to its sale or otherwise, and thus to make its ownership even more onerous and unprofitable than it is at present.

It should, I submit, be remembered that in this case of double notice it is not only the holder of many acres (popularly supposed to be a person of enormous wealth) who would be called upon to suffer. The small people who buy or own a farm, and who or whose representatives afterwards let it, would also find themselves injured should circumstances arise under which it is found necessary or desirable to sell. From these, too, an extra year of notice could be claimed, and their power of delivery to a purchaser thereby circumscribed. In short, this Bill, if it becomes an Act, will discourage ownership of English land, a result which, I imagine, no party in the State can really desire, with the exception, perhaps, of that of the advanced Socialists.

On p. 267 of this book I alluded to the forthcoming sale of the Great Glemham property which belonged to the Marquis of Graham. This sale has recently taken place, and I will quote here a paragraph concerning it which appeared in a journal of Liberal views, the *East Anglian Daily Times* of 19th June 1912. The facts set out therein seem to me most instructive, and should furnish food for reflection to those who, from lack of knowledge or for political purposes, are talking so loudly of the present "boom in English land." The truth is that, taking the country through, no such boom exists, though rich pasture or fen lands are saleable at a fair price, especially in small-holding districts. I should add, what the paragraph does not mention, that there is a beautiful house on the Great Glemham Estate which alone must have cost many thousands of pounds.

### THE GREAT GLEMHAM ESTATE SALE

"With reference to the purchase of this fine estate by Mr. P. C. N. Peddar at the moderate price of £36,700, it is of interest to recall the previous sale of the estate to the late Duke of Hamilton in 1871 (41 years ago) by Messrs. Garrod & Turner, of Ipswich, acting for the Lofft family, with whom the late Dr. Holden, of the Ipswich Grammar School, was connected. The estate then consisted of 1648 acres, and realised £82,335—just £50 per acre—and at that time one-fourth of the property was copyhold. The estate now consists of 1953 acres, all freehold, and the price realised is just under £19 per acre.

"With the enfranchisement of the copyhold and the purchase of the additional 300 acres, the estate probably cost the late owner £100,000; therefore

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"during the 41 years it has been held the capital value  
"has depreciated in round figures at the rate of £1500  
"per annum—a fact that should interest politicians of  
"both parties."

It should indeed!

I cannot close this note without returning my thanks to my Danish friends for the favour with which this book has been received by them, and in Denmark generally.<sup>1</sup> It is very satisfactory to an author who ventures to write upon the agricultural affairs and policy of a foreign land to find the accuracy of his remarks and conclusions practically unquestioned by those who alone are in a position to express an authoritative judgment as to their value.

H. RIDER HAGGARD.

DITCHINGHAM, *July 1, 1912.*

<sup>1</sup> A translation of "Rural Denmark" appeared in the columns of the great Danish paper *Politiken*, and was afterwards published as a supplement by that journal.

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# RURAL DENMARK

## AND ITS LESSONS

### AN OLD DANISH TOWN

AFTER an encounter with the North Sea in one of its ugly moods, emphasised by the fact that the steamers from Harwich to Esbjerg bring little cargo and therefore roll proportionately, the visitor to Denmark may do worse than spend a day of convalescence in visiting the old town of Ribe. It lies about fifteen miles to the south of Esbjerg, not far from the German frontier, and is best reached by rail, though perhaps a motor-cab would do the journey in less time. Some Danish trains progress but slowly.

Thither I went upon a beautiful Sunday in September 1910. The first thing that I noticed was the enormous number of Danes who seem to travel on the Sabbath, apparently for holiday reasons. The fine station of the rising port of Esbjerg was full of them, as was every other at which we stopped, and in the train itself there were no seats to spare.

As for the travellers, these much resembled a collection of ordinary English folk in their best clothes; indeed at a distance and out of earshot it would be difficult to discover any difference, perhaps because the blood is so largely identical. In manners, however, there is a difference, since the average Dane

is much more polite than the average Englishman. Everybody takes off his hat to everybody else, even to the hall-porter or the guard, and is delighted to give the stranger any help or information in his power. The people also have an educated look, and clearly are great readers of newspapers, of which I was informed about 250 appear in Denmark. That is one paper for every ten thousand of the inhabitants. I wonder whether they all make money.

The land here upon the west coast is reported to be some of the poorest in Denmark, and certainly it is very light and sandy, though varied by marshes of fair grazing quality. The cultivation is in small strips, in some of which the rye or oats had been reaped, while others were under potatoes or roots, the latter for the most part not too free of weeds. A good many conifers are being planted in this district, but most of these are still small. As the country is perfectly flat, the prospect is extensive but characteristic. Here and there appears a typical Danish church with its white tower surmounted by a wedge-shaped roof, or a windmill, or a farm-steading surrounded by a belt of trees to protect it from the tearing gales. These farms, if old, are half-timbered, with whitewashed squares between, or if of more recent erection are built of brick. It is wonderful, and very suggestive of the agricultural prosperity of the land, how many comparatively new farms are to be seen everywhere, also neat cottages and out-buildings occupied by small freeholders.

Poor as the soil is in this part, without doubt the most is made of it, for I noted that even the heather land was being ploughed up and put under crops. The cattle, many of which were of the spotted black-

and-white variety, were all tethered by ropes long enough to allow them just sufficient to eat, no more; as, it being Sunday, were the farm horses. Such is the general rule in Denmark, partly on account of the complete absence of fences and still more because the thrifty farmer does not believe in wasting green fodder by allowing his beasts to soil and trample what they do not eat.

This plan, which, by the way, may be seen in practice in the Channel Islands, has considerable advantages. Thus the clover, or whatever it may be that the cattle are feeding on, looks almost as though it had been mown behind them, and in front remains quite fresh and tempting. Also an even manuring of the field is secured. On the other hand the continual driving in and pulling out of pegs involves a good deal of labour. The beasts, too, cannot seek shade from the heat, or water themselves at a neighbouring pond, and, as their space for exercise is so limited, must be rugged in canvas coats when the weather grows at all cold.

Lastly, these cattle have been accustomed to tethering from generation to generation, and bear its inconveniences with dignified calm, never becoming entangled in the ropes or otherwise misbehaving themselves. What would happen if an attempt were made to peg down an uneducated herd of English cows I am sure I do not know. I should not care to be the one to make the experiment, to which in Denmark even the sheep consent, though these, it should be added, are few in number.

Ribe itself has, I think, a more old-world appearance than any other city that I visited in Denmark. Once it was a very important place and

the residence of kings, but now its trade and glory have departed, its castle is destroyed; of this there is left but a mound surrounded by a wide moat filled with feathered and whispering reeds. Indeed it reminded me much of some of what are known as the Dead Cities in Holland. The cathedral remains, however, built for the most part of stone that was brought by sea from the Rhine in the twelfth century. It presents a strange mixture of styles—Norman, Byzantine, and, so far as the tower and two aisles are concerned, Gothic.

The whole building has been very carefully restored of late years, perhaps a little over-restored. At any rate the seventeenth-century organ, glittering with enamels, struck me as rather too brilliant. It was pleasant to turn from it and contemplate the monuments of old worthies let into the walls and containing oil-portraits of the deceased—a lady and her two husbands, for instance, or a gentleman and his two wives. This form of monument is common in Denmark, though personally I have seen it nowhere else. It is to be observed that the portrait painters of those days did not condescend to flattery.

Ribe is a country town in the truest sense of the word. Thus many cows are stabled there, and driven out every day to pasture. The inhabitants, too, often divide their attentions between a shop and a farm. It boasts a co-operative butter factory, but a great deal of the milk produced is consumed in the neighbourhood.

Perhaps the most charming thing about the place is the vast prospect it commands, say from the top of the castle mound. Indeed the local jest is that any one lying flat on his back outside Ribe can see

· twenty-four miles in whatever direction he turns his eyes. I did not try the experiment, but standing on my feet I observed and was delighted with the endless extent of verdant marshes dotted with cattle.

In the foreground the river flashed in the sunlight, while far away the plain was broken by the dense mass of a wood, and to the left of this by a tall windmill. In the middle distance appeared a building with a roof of brilliant red, and around it yellow stacks. This I took for a farm, but in fact it is some kind of a workhouse, which the inhabitants of Ribe have contrived to render picturesque. Then to the right rose the tall tower of the cathedral dominating the gabled roofs beneath. Altogether the scene was lovely and peaceful, at any rate to one who finds beauty in a flat and fruitful land.

Many of these rich marshes are the property of the town, and their freehold value appears to be about £55 the acre. The old buildings I have no space to describe, or the little museum in which there is a nice collection of executioners' swords. I confess that I left Ribe with regret, and with grateful memories of the kind reception that I met with at the hands of some of its leading inhabitants.

## THE BRÖRUP CO-OPERATIVE DAIRY

BETWEEN Esbjerg and Bramminge, a little town to the east, the land, which is wide and flat, struck me as poor in quality. For the most part it is under grass, mixed with strips of arable, on some of which mangolds are grown. The farms vary in size from little holdings up to about 200 acres, which would include a proportion of moorland; perhaps an average property may contain about 100 acres. Many churches and buildings are to be seen, the latter good and often thatched, some of the old barns being very large.

At Bramminge I visited a co-operative dairy which deals with 6000 lbs. Danish of milk a day. Here I should explain that the Danish pound or half kilo weighs roughly a tenth more than our English pound. This dairy I will not stop to describe, as later in the day I saw one that was larger at Brörup.

The Brörup Andelswejeri, or Co-operative Dairy, is a long, whitewashed building with a tall factory chimney and raised *stoep* or verandah bordering on the roadway, on to which the milk-cans are delivered from the carts. At the moment of my arrival one of the carts was in course of being loaded up with empty cans for return to the subscribers. These cans, although smaller, are similar in shape to those we use in England. The factory owns eighteen such carts, but the horses that draw them are hired.

At six o'clock every morning the co-operative carts arrive laden with about 27,000 lbs. Danish of milk collected from 264 co-operating members.

Perhaps the best thing I can do is to describe what happens to this milk from the moment it is unloaded on to the stone *stoep*. First it is weighed on an ingenious machine that registers the weight automatically. The empty tins are then set upside down on a kind of travelling rack to drain, the drippings from them, which average 80 or 90 lbs. weight per day, being carried off in metal troughs. These drippings, that are richer than the rest of the milk, the dairy receives gratis as a perquisite.

After filtering, the milk is warmed by steam-pipes in a double-jacketed cylinder to 60° Celsius (that is, 140° Fahrenheit). From the cylinder it runs into steam-driven separators revolving at 6000 revolutions per minute, which remove the cream that goes one way into zinc tanks, while the skim milk goes another into a second cylinder. Here this skim is reheated to 85° Celsius (or 185° Fahrenheit), and runs into a tank. Thence it is weighed out, three-fourths of the amount being returned to the co-operators in the exact proportion of the quantity of whole milk supplied by them, and one-fourth retained by the factory to be converted into cheese. This fourth is paid for at the rate of 1 öre, or half a farthing, per lb. Danish.

I should state that, except upon one day a week to serve the local market, no butter is made in this particular factory, whence the cream is exported to Germany. In Germany there is no duty upon cream, although there is a duty upon butter, and therefore it pays to export the cream to be churned across the border.



The sour milk that has become so fashionable is also made here in great quantities with the aid of the proper bacteria, and disposed of in glass jars.

Attached to this dairy is a cheese factory that turns out from 900 to 1000 lbs. of cheese per diem, which are manufactured from about 12,000 lbs. of milk. The curd, a granulated substance, is worked by men with their hands in two huge wooden vats, and afterwards conveyed to the cheese presses, that are furnished with powerful screws. Near by are the stores, filled with an enormous quantity of flat, round and square cheeses set on racks. These dark stores are lit by electricity. Many sorts of cheeses are made, one of which, known as Gouda, contains fifty per cent. of sweet milk. The factory price for this cheese is about 7d. per lb.

I was informed that a factory of this sort and size, including machinery, costs from £3500 to £4000. When it is thought advisable to establish such a factory in any district, the necessary capital is borrowed and guaranteed by the local farmers in proportion to the amount of milk to be supplied by each of them. Should the venture fail, these farmers must pay up in proportion to their respective guarantees. This, however, is not a liability that need disturb their sleep at night, as if any co-operative factory in Denmark has failed of late years I have not heard of that event. Thus this place at Brörup, which may be taken as a fair sample, is, as the manager informed me, in a prosperous condition and able to pay a good price to the co-operators for their milk—namely, a shade over 19 øre per two kilos, that is a fraction under 2½d. per 4 lbs. 6 oz. English, plus the skim returned or paid for, as stated above.

• All milk supplied is sampled by experts once a week. If any particular lot does not come up to the required standard the farmer is warned, and if the deficiency in fat or other imperfection continues, his milk is refused. This rarely happens, however, as the general result of such a warning is that the quality of the aspersed milk improves. Indeed the milk in the neighbourhood of this factory, and I believe of most others, grows better and not worse.

A co-operative dairy of this kind, although kept most scrupulously clean, is not altogether a pleasant place to visit. To begin with, the din caused by the rattling milk-cans and machinery is great, so great that the collection of information in the midst of it is a matter of some difficulty, especially when obtained through an interpreter. Also the floor swims with water, of which a vast amount is used in the needful washing of everything, with the result that any ordinary boots are soon wet through. In order to keep their feet above the level of these continual cascades and pools lying in worn spots, the employés wear high wooden clogs. Further, they are provided with white linen overalls.

On leaving the factory I drove to a nice-looking farm that stood near, of which, I was informed, the owner is one of the Brörup co-operators. Our visit was entirely unpremeditated, and unfortunately this gentleman, Mr. Ludvig Andersen, was away from home. A very intelligent young man in his employ kindly showed us over the place in his absence. The holding, which comprises about a hundred acres, was well cultivated, the mangolds and white turnips being very good indeed and quite clean. The house and

buildings form a square, of which one side is devoted to the dwelling and the remaining three to the buildings that are thatched and felt-roofed, the courtyard within being paved with cobbles.

First I inspected the stable, which held four horses, and like all the other buildings was lit by electricity. Next to it was the cowhouse containing twenty-four red Danish cows that were in from the field for the midday milking, as, like many Danish farmers, Mr. Andersen milks three times a day. This custom is said to insure a heavier yield, which more than compensates for the extra labour involved.

I noticed at once that here, as in many other places, this byre was much warmer than we think it advisable to keep cowhouses in England. Also the ventilation did not seem to be so good as is usual with us. Often this heat is no doubt caused by the low ceilings with lofts above that are common in Denmark. I incline to think, however, that the cows as a rule are purposely kept in a high temperature in order to increase their supply of milk, which warmth is said to do. Whether the risk of tuberculosis is not also increased thereby is a technical matter that I will not discuss, though my own opinion is that this must be so.

These cows were good average specimens of the red Danish breed. Our guide informed me that the cost of the ordinary run of such cows, inclusive of a new-dropped second calf, would be about 250 kroner, or say £14, but that cows of a higher class fetch from 300 to 350 kroner, say up to £20. This still remains less than must be paid at present for a good short-horn of like age in England.

The cows here lay two in a stall, and over each of them was hung a tablet stating when the animal was

expected to calve, the weight of milk it was yielding, which is averaged every other week, the amount of cake it received, and other particulars. Once a fortnight a highly educated, expert woman, who is hired co-operatively, visits these cows and tests the milk of each of them to determine the amount of butter-fat it contains. When this is ascertained she directs the exact weight of cake each beast is to have, the general rule being that the more milk a cow gives the more cake is fed to it. At the time of my visit (September), in addition to chaff and the food they gathered on the field, these particular cows were receiving an average of from 1 to 2 lbs. Danish of various sorts of cake. In winter they get much more—up to 8 lbs. a day.

All the milking on this farm is done by a machine, the cows being afterwards “stripped” (that is, milked dry) by hand. Our guide told me that they were well satisfied with the working of this machine, which had been in use there for two years.

Next to the cowhouse is a piggery containing a number of pigs and countless flies. I noticed these flies in almost all the Danish piggeries. Doubtless their unwelcome presence is due to the local habit of keeping swine, not in open styres or yards as we do, but in a low-roofed building, sometimes not too well ventilated. Certainly the pig is a very adaptable animal. Here most of us consider that the more air it gets the better it thrives, but in Denmark it flourishes exceedingly under quite different conditions.

In another part of the square stands a great barn, then filled with the harvest of unthrashed grain. It is not common to see stacks in Denmark, most of the corn being stored in such barns. Also we saw a three

horse-power oil-engine which, amongst other work, manufactures the electric light.

In answer to my questions, our conductor informed me that farming was profitable in that neighbourhood. He added with a smile that his employer, who like most agriculturists in Denmark owns his farm, kept a motor-car. Certainly the appearance of that gentleman's very comfortable house, a long, one-storied building, seemed to suggest that more is made out of a hundred acres in this part of Denmark than either the landlord or the tenant, or both of them together, expect to receive from a like area in England. Perhaps the fact that the co-operative milk factory lies within a quarter of a mile may have a bearing on the case. Or there may be other reasons with which I am not acquainted.

## THE LADELUND AGRICULTURAL SCHOOL

ON our way to the Ladelund Agricultural and Dairy School we drove through a really fine property named Estrupgaard. This, I was informed, consists of 500 acres of agricultural land and 400 acres of forest, as things go in Denmark a large estate, all of which is farmed by the owner. The house is very picturesque, being in the Dutch style with a tiled roof, and the farm buildings, that owing to a recent fire had been newly rebuilt, are beautiful. These are of brick with stone pinnings and covered with ornamental thatch, which is held down at the ridge by means of logs of wood slung in a quaint fashion. The land, which is light, seemed to be highly farmed, and on it I saw good crops of mangolds, swedes, and potatoes. On one field a man, standing in a cart drawn by two horses, was scattering artificial manure very skilfully as the vehicle progressed, and in another Polish girls were engaged in digging up potatoes.

Ladelund School, where I was received by the Director, Mr. Overgaard, comprises a square of handsome and serviceable buildings, to which is attached a farm of about fifty-two acres. Mr. Overgaard informed me that this great educational establishment is financed by a limited company, which looks to the pupils for its profit. As a matter of fact it just pays its way with the help of a small State subsidy of

about £330 a year. In winter the pupils number one hundred and eighty, and in summer thirty, of which five or six are women who are trained to be milk-testers, &c. The very moderate fees payable, including board, amount to about £2, 5s. a month, the only extras being a small sum for light and heating. There are two courses, one agricultural which occupies five months, and another for dairy work which extends to twenty-eight months. The practice seems to be to take in pupils in the order of their application until the school is full.

First we visited the bacteriological classroom where water, milk, and all milk products are chemically investigated. Here sixteen pupils clothed in white jackets were attending a lecture on the bacteria which develop in milk and water and in certain cross-cultures of the same. They were very intelligent-looking young men, each of whom had test-tubes in front of him, which he seemed to be studying diligently.

Passing through the large gymnasium, where the students exercise themselves for one hour every day, we came to the Dairy Museum, which is housed in a wooden shed. Among the ancient machines exhibited there and in the adjoining agricultural museum are some of curious interest. Thus there is a primitive milking apparatus designed to be worked by hand, which dates from 1785. This machine, if it was ever used, pressed the cow's teats between leather-lined nippers. As we know, those of recent days for the most part effect their purpose by means of suction and otherwise. Now, however, oddly enough the Ladelund authorities are trying a new type of milker, which also works by pressing the teat of the cow, and

not unsatisfactorily, although Mr. Overgaard said that he still prefers to use the human hand. It would appear, therefore, that the old inventor of 1785 was after all on the right tack.

Especially interesting also is the series showing the gradual development of the plough, the earliest of which are not unlike implements that I have seen in actual use in Palestine and elsewhere in the East. I am not aware whether any collection of this kind exists in Great Britain. If not, I venture to suggest that one might be formed before it is too late.

An interesting feature of this school is the chemical laboratory where investigations are made of the constituents of milk, manures, and feeding-stuffs. Even skim milk is analysed here to ascertain what proportion of the fat is removed by the separator. Or rather I should say what proportion is not removed, since it seems that no more than one-tenth per cent. ought to be left after it has gone through the machine. Sundry of these separators were being experimented with at the time of my visit, but for obvious reasons I will refrain from saying which were considered to be the best.

To me the farm attached to Ladelund was as interesting as the school. Thirty cows are kept, and a very fine bull of the red Danish breed which in appearance, although darker and larger, resembled our East Anglian redpolls. Mr. Overgaard told me that from these cows an average annual milk yield—which, by the way, is being raised every year—of 8000 lbs. Danish is considered satisfactory, although from very exceptional animals 16,000 lbs. have been obtained.

All the milk from these cows, together with some that is bought in the district, after separation is made



into butter in churns driven by a fourteen horse-power engine. This butter is hardly touched by the hand at any stage of its manufacture. But to describe all the machines in use at Ladelund would be too long. These are everywhere in this remarkable educational establishment, which may well serve as a model to other lands.

## THE ASKOV HIGH SCHOOL

BIDDING farewell to Ladelund, we drove on to the Askov High School through a pretty, prosperous-looking country, dotted everywhere with clean and comfortable farmhouses situated amidst well-tilled fields of rather light land. As we drew near to Askov we overtook or were overtaken by numbers of people travelling thither, on foot or upon bicycles. All of these were well-dressed, and with the usual Danish politeness saluted us as we passed. At first I thought that they must be bound for some festivity, until it was explained to me that this festivity was nothing more gay than an afternoon lecture upon a subject of historical interest.

Here perhaps I should explain that Askov is one of the most famous of the People's High Schools, which are, I believe, peculiar to Denmark, where about eighty of them exist. These schools are patronised by young men and women of between seventeen and twenty-five years of age. To a certain extent they are under Government inspection and receive Government aid, while the necessary capital appears to be supplied privately. Their object is education in its highest sense, and the strangest thing about them to an Englishman is that about ten per cent. of the population of Denmark passes through these High Schools at its own expense. Especially is this so if he chances to be a magistrate whose frequent duty it is to inflict fines upon parents

who stubbornly refuse to avail themselves of the gratis teaching furnished by the State. I submit that this fact shows that the mental outlook of the mass of the two peoples is different ; that they consider life from diverse standpoints.

It is almost impossible for us to conceive a state of affairs under which 10 per cent. of the population of England, male and female, would pay 11s. a week out of its individual pockets in order to spend six or even three months in studying history, mathematics, physics, drawing, singing, geography, geology, mythology, chemistry, physiology, and other subjects. This, too, at an age when most young people have shaken off the dust of school with joy, and simply in order the better to prepare themselves to face the struggle of life and to become worthy citizens. It must be remembered, moreover, that there are no examinations at these High Schools, and consequently no degrees which open direct doors to a career. Learning and learning alone is the aim and the prize, with the result that the Danes are an extremely well-instructed people.

That they are aware of this the following story seems to show. An English lady whom I met in Copenhagen told me that not long ago her motor broke down in a rural part of Denmark. While the repairs were being effected she fell into conversation with a farm lad who had lent her a rope, and found that he could talk French and German, could understand but not speak English, and was studying Latin ! She remarked that it would be difficult to find a labourer in England who possessed so many accomplishments.

"Yes," answered the youth quietly, "but then

‘every one knows that the English are very badly educated.’”

The lady might have replied that we spent enough millions a year upon education to insure a different result, but I am not aware that she thought it worth while. The truth is that we may lead our youth to the wells of learning, but in many cases no power on earth can make them drink. In this matter, as in certain others, there is something wrong with the state—not of Denmark but of England, or perhaps it is our system of education that is wrong.

When I visited Askov, which is perhaps the first of the Danish High Schools, being, as the Director informed me, a kind of continuation school for the others, that establishment was not in session. No pupils are received here from August to November, that is during the harvest months, as most of these young people are farmers’ sons and daughters who must be at home at that time. The lecture to which I have alluded was, however, just beginning in the gymnasium, where a crowded audience of about seven hundred people had gathered, so crowded indeed that all of them could not get in at the door. There they stood upon the steps, straining their ears to catch such words of wisdom as might reach them. This audience, it seemed, consisted of people from the neighbourhood, among whom were included many former pupils.

The best view of the Askov establishment is obtained from the top of a central tower to which I was taken. The school began, in 1865 I think, with a single house. Now there are many houses where, with the exception of some who live in the town, 250 pupils reside in winter—namely, about

140 young men and 110 young women. Of these the latter lodge in the teachers' dwellings, where they take their meals.

The winter course extends over six months, and that of summer, when only 150 pupils attend, some of them quite young girls, over three. The fees payable are about £15 for the winter session and half as much for that of summer. For this amount education, board, and lodging are provided, a little extra being charged to cover the cost of heating, laundry, and lighting. If, however, the would-be student is poor and deserving, the State will in certain cases contribute a sum of £6 or £7 towards these expenses.

Of the buildings it will be enough to say that they are admirably adapted to their purpose. There is a general lecture-room which can accommodate about 350, an extensive dining-hall, a really fine library, a reading-room furnished with reference books, and a splendid gymnasium. Also apart from the High School is a weaving-room, where that and kindred arts are taught. This is owned by Miss Lacour, one of the teachers, but no pupil may attend it while she is taking her course at the High School.

Such is the Askov High School, a place that interested me deeply.

Not far from the school is the electricity station, where light and power are generated by means of a large windmill. Wind, as it was remarked to me, is very cheap and plentiful in Denmark, whereas coal, which must be imported, is dear. Still, even in that land there are periods when no breeze blows. Therefore it has been found necessary to instal an auxiliary gas-engine, although, as the system of accumulators

is extensive, the services of this engine are not often needed. The electricity generated here lights the town and college, and supplies power to various machines. Another windmill close by pumps the local water. This station seems to be a Government venture, but I did not gather that it is considered a complete success owing to the uncertainty of everything that depends upon wind.

I visited an interesting spot in this neighbourhood which is known as Skibelund Krat, where there is an open-air meeting-place situated in a kind of natural theatre. All about this theatre stand monuments to historians and poets, or learned persons connected with Danish education. One of these, to Ludwig Schröder and his wife, the founders of the Askov High School, had been only unveiled on the day previous to my visit.

The view from a monument known as the Magnus Stone was singularly charming in the quiet light of the evening. Diversified by plantations, fields, and farmhouses, the landscape slopes gradually upwards to Schleswig in Germany, which is here divided from Denmark by a little stream running at the bottom of a gentle valley. I was told that the Danes who reside on German territory come to this place to hold meetings almost every Sunday, and thus keep themselves in touch with the land from which they have been divorced.

## HENNEBERG LADEGAARD

FROM the pretty seaport of Fredericia, on the east coast of Jutland, I made an expedition to visit Henneberg Ladegaard. This is a farm famous for its short-horn cattle, which were introduced into Denmark by its late occupier, Mr. Hansen. The holding of about 200 English acres differs from most in Denmark inasmuch, as it is not owned but hired, the present tenant being Mrs. Hansen, the widow of the former occupier. The rent paid is about £2 per tøndeland; that is, one English acre and a third. Originally it was held on a long lease, but now the tenure seems to be that the tenant can leave at one year's notice, while the landlord must give five years' notice. At least that was what I gathered, though the arrangement is so intricate that my information may not be correct.

The house is of a pleasant and old-fashioned character, furnished with tall-backed chairs, high stoves, and a piano resembling a spinet. Here we found Mrs. Hansen, who, with the proverbial Danish kindness, at once offered to show me the farm and its famous cattle. Passing through the usual square of thatched out-buildings with its central yard, we went to a field where forty-one tethered cows were undergoing their midday milking. Formerly shorthorns only were kept here, but now a proportion of the cows are of the usual red Danish breed.

Whilst we were looking at these beautiful short-horns, which, by the way, submitted to tethering as

readily as do the native animals, Mrs. Hansen told me the history of the herd. It seems that her late husband bought the first of them a good many years ago in England, giving a high price for pedigree bulls. The result, however, not proving financially successful, the Government, in recognition of Mr. Hansen's public spirit and enterprise, made him a subvention of about £220 a year to help to balance his loss. This allowance was continued for eight years, but was withdrawn five years ago when he, or his executors, began to keep Danish as well as shorthorn cattle.

I was informed that, as might be expected, the experience on this farm is that the shorthorns do not give as much milk as the red Danish, but that on the other hand they fatten better. They are kept here for breeding purposes. A young bull out of a fine white cow fetched £66 at two years old; to which, in accordance with the Danish custom, a sum of £27, 14s. is to be added should his stock prove successful. This animal was bought by a Co-operative Society. An average price for young bulls of the breed at about one and a half years is £28, which is less than we have to pay for good shorthorn bulls at home. Thus I have recently paid £40 for an unregistered animal of about that age. In Denmark, as in England, white shorthorns are not so popular as red or "schimmels."

Personally I doubt whether under the present conditions in Denmark, which aims at the production of milk rather than of beef, the shorthorn breed can be expected to compete seriously with the excellent local stock. That the former is appreciated there, however, is shown by the multitude of exhibition cards and medals to be seen in Mrs. Hansen's office. Also I saw



no less than thirty prize cups, twenty-four of them of silver.

The labour employed on the 200 acres consists of six hands, who are overlooked by Mrs. Hansen's son—namely, a “fodder-master,” a stable-boy, and four others who generally work by the piece. The fodder-master receives about £20 a year with food and lodging, and the others rather less, though some of these, as I gathered, have a cottage and a cow given to them. The land is worked on a seven years' rotation. Thus the field upon which the cows were tethered had borne a crop of oats in which clover was laid down, that will stand for two years. After the clover comes a mixture of barley, oats, and vetches, such as we call “dredge,” which are thrashed and ground for cattle. A fallow follows for one year, then wheat and perhaps rye, then barley, then beet and some green fodder, then oats again sown down with clover.

The horses, of which ten are kept, are very light compared with ours. It is curious to see the mares ploughing with their foals running at their side. Here we should think this dangerous, as the foals might get heated milk, and in consequence suffer from scour, but I suppose that this risk is guarded against in some way. Square-head wheat is grown, which, like all the corn, is stored in barns, not stacked.

Altogether this is an excellent farm, but I fear that the introduction of the expensive shorthorn cattle from England has proved a somewhat costly experiment.

At Dansgaard, near by, Miss Thygeson, the owner of this property, which, it will be remembered,

is rented by Mrs. Hansen, lives in a country house that commands a charming view of the Little Belt and of the fertile island of Fyen. Here I was shown a poultry farm where are kept many fowls and fine geese, which feed largely on seaweed, green fodder, and grass. Also there are black and white turkeys. Turkeys, by the way, are difficult to rear in Denmark owing to the dampness of the climate, and therefore most of these birds are imported. On Dansgaard there is a nut orchard of about sixteen acres in extent, of which in good years the produce sells for £111. I observed that seaweed was packed round the roots of the filbert bushes to keep them cool and damp and to act as a manure.

The country round Fredericia is very English in its aspect, the roads being bordered with fences of hazel and sloes. Here and there, by the gates of farms or at the entrance to side lanes, stood milk-tins returned by the local Co-operative Factory carts to its subscribers, and containing the proportion of skim milk that was due to each of them. One of the advantages of this co-operative system is that the farmer need spend no money or time in carting his milk to the station or place of sale.

This day, the 20th of September, was kept throughout Denmark as a kind of Hospital Tuesday for the benefit of the seaside homes for tuberculous children. Everywhere in the towns and at the railway stations were to be seen pretty and well-dressed young ladies carrying baskets of daisy-like blooms known as "harvest flowers," which are made of linen and mounted upon pins. The price of these tokens is ten øre (a penny farthing), and there was hardly a man or woman

who did not wear one or more. Indeed the coats of some charitable persons were decorated with many of them. Also certain insurance offices and other societies pin a harvest flower to each receipt they issue on this day, and sometimes the dishes at dinner-parties are adorned with them. The idea struck me as both pretty and useful, as one, too, that might be adopted with advantage in this country. Not only is a great sum raised by means of it for the benefit of the hospitals concerned, since on such an occasion even the poorest do not like to be seen without a flower, but those who have contributed their mite are troubled no more by the fair vendors. As we know, in England this is not the case. I commend the plan to the notice of our charitable institutions.

## AARHUS AND A PIG FARM

BETWEEN Fredericia and Aarhus, a journey of two and a half hours in what is called a fast train, the country seems extremely well farmed, and for Denmark quite hilly. Indeed to the eye, except for the absence of fences, it much resembles some parts of England. Many of the cattle are of the black-and-white Jutland breed, and the fact that even in the early autumn they were clothed in canvas jackets, showed that here the climate was growing colder.

Aarhus is a fine and prosperous seaport, with a population of about 35,000. It boasts a beautiful cathedral with many monuments, an excellent museum, and a library remarkable for its quaint internal architecture, whence books are sent out free of postage to any one in Denmark. All these institutions and others I saw under the kind guidance of Mr. Holm, the head of the Tourist Union in that city.

In Aarhus I visited the local branch of the Combined Societies of the Danish Co-operative Unions. Mr. Brask, the manager, informed me that although now anybody can belong to it, the capital of this institution was provided in the first instance by shareholders who were farmers. Or, rather, it was guaranteed, since the members' only pay an entrance fee of 5s. 6d., which is refunded to them out of profits. The original working capital of £1100 was borrowed about five-and-twenty years ago. Since that date the business has increased to a remarkable

extent. Thus in 1908 there existed 1200 Unions of the Society, numbering 170,000 members, which Unions pay a dividend of from 4 to 5 per cent., after deducting and placing to the reserve fund one-third of the total profit earned. In 1909 this reserve fund, most of which is used in erecting new buildings and otherwise in extending the work of the Union, amounted to 2,162,217 kroner (nearly £120,000).

The Society supplies all sorts of goods to its members, such as groceries, draperies, hardware, clothing, boots, &c. Indeed it deals in everything except agricultural implements, which are handled by a separate Union. The financial risk is divided amongst the members, each Union being responsible for its individual debt; but if any default were made by the central office, the affiliated Unions would not be responsible.

Some years ago this Society came into conflict with the private traders, with the result that the wholesale agents refused to supply it with goods. In the end, however, it grew so strong that the opposing combination broke down, and, disregarding the agents, the Society bought direct from the manufacturers. One of its rules is that all goods supplied must be paid for in cash within thirty days. Deposit accounts, however, are allowed, and 5 per cent. interest is credited to them, but on any overdraft 8 per cent. is charged. It is satisfactory to know that this great and successful co-operative institution had its origin in England—that is to say, it was modelled on the system of the Rochdale Weavers' Society.

In Aarhus I noticed for the first time that, as in all the big Danish towns, the meat exposed for

sale in the shops must by law be stamped as a guarantee of its quality. For this stamping the butchers pay a small fee. The best meat bears a blue stamp, and that which is somewhat inferior a black stamp. In this city also a staff of young women is employed seeking for trichinæ in pork, which communicate to man the disease known as trichinosis. If by chance one of them discovers an infected carcase, she is rewarded with a donation of about £1. Therefore, as may be imagined, the search is eager and persistent.

\* Some miles from Aarhus is a famous farm of 1100 acres, named Thomasmind, which was kindly shown to me by its owner, Mr. Pontoppidan. Mr. Pontoppidan's speciality is pigs, of which he stocks no less than 1200. The principle followed on this place is to keep the pigs as near as possible to natural conditions with regard to their food, ten months being allowed to grow them to a weight of about 200 lbs. Danish. The result of this system of slow fattening is that Mr. Pontoppidan's animals are entirely free from swine-fever or tuberculosis. Indeed, out of 3000 pigs sold, only one has been refused by the slaughter-house, and at the time of my visit but ten of the 1200 were unwell from any cause. At any rate he attributes this immunity from all the ills to which pigs are heir, to his method of management. At first he used to insure his stock, but as none died he abandoned the precaution as a useless expense. This to my mind indicates that Mr. Pontoppidan must be peculiarly favoured by fortune, since the general experience of farmers is that if they are tempted by long immunity to cease

the insuring of stock or stacks, a grievous murrain promptly breaks out among the former, or the latter fall a prey to fire.

Mr. Pontoppidan breeds all his own pigs, which in race are Danish crossed with Yorkshire. His sows are only allowed to produce five or six litters, after which they are fattened to a weight of from 400 to 500 lbs. Danish. Observation has shown him that after five or six litters the sows both eat and overlie their offspring; also that the pigs born between the second and the sixth litters are the strongest and do the best. His principal feeding-stuff is maize, but he also uses broken wheat or rye from the English and Black Sea mills, 500 lbs. of skim milk daily, turnips, kohlrabi, swedes, and mangolds. Lastly the fattening pigs receive amongst their other foods all the blood from the Aarhus slaughter-houses, which is pressed into cakes and mixed with salt and borax. Of these cakes that are stored in racks, nearly 1000 lbs. are used daily. Their cost is three-eighths of a penny per lb., and they contain 35 per cent. of albumen.

Mr. Pontoppidan considers that if it were not for the pigs his farming would be unremunerative, as the cows only just pay their expenses. He added, what I was surprised to hear, as the information I was able to gather did not corroborate the statement, that there is general dissatisfaction with cows throughout Denmark. Still, he keeps 400 of these animals in addition to the 1200 pigs.

The pig-pens are arranged in a large, round building, and in all my agricultural experience I have seldom seen a more remarkable sight than they afforded. First we went upstairs, where live the

young pigs which are being "grown on." As we appeared among these, hundreds of heads and fore-legs were thrust over the tops of the styres, and from hundreds of hungry throats rose a chorus of piercing yells. Indeed the din was so tremendous that I was glad to escape from the place. On the ground floor were the pigs whose earthly career was drawing to an end, many of them being already marked with the fatal black spot which indicated that on the morrow they must make their first and last journey—to the slaughter-house.

At that date pork was, and I believe still is, fetching a price in Denmark that at present makes its breeding there a most remunerative business—no less indeed than 5d. per lb. This is paid for the animal as he walks on to the scale, and for that reason it is customary to feed a pig as heavily as possible on the morning of its departure. It is given an opportunity of satisfying itself with every dainty before it dies, and as it reckes not of the future its appetite rises to the occasion. At 3½d. (30 öre) per lb., pork production is fairly remunerative, while 3d. (24 öre) per lb. covers all outgoings and risks. The average cost of a pig from the hour of its birth to that when it enters the bacon factory, including an allowance for labour, rent, and every other expense, is here reckoned at £2, 9s. 10½d. (45 kroner), and the average price it realises is £3, 6s. 6d. (60 kroner).

In another part of the piggery are kept the great drop-eared boars and the new-littered sows. Here the piglings are weaned by means of an ingenious contrivance of wooden bars, behind which they are confined, only being allowed to the mother at stated



intervals, which grow rarer until they are sufficiently hardened to be moved upstairs.

Three men—two young fellows and a feeding master, as I was informed—feed all this multitude of swine, though how they manage to accomplish the task I am sure I do not know. I may add that the flies were as troublesome here as in every other piggery I visited in Denmark. Indeed Mrs. Pontoppidan told me that during certain seasons of the year, although the house stands at some distance, she is obliged to keep the windows closed in order to shut out these pests, which in warm weather must be very trying.

When we had finished with the pigs, I visited one of the byres containing rather over a hundred cows—Danish black-and-white crossed with Friesland to the left, and red Fyens to the right. This byre is an extremely well-arranged building. Thus fresh water flows in runnels in front of the cows, and carts laden with turnips come down the gangway, travelling on raised tram-lines by means of trolley-wheels, while the hay is stored in a great loft overhead. As feeding was in progress, the scene here was very busy, and I noted particularly a little girl running from trough to trough, which it was her business to brush out. Fourteen hands, nine men and five women, milk and tend all these cows and the six bulls, or so I was informed. The liquid manure from this great herd and the pigs is stored in a tank with a capacity of 4,000,000 lbs. Danish, so contrived that the stuff can be drawn off into the manure carts for distribution on the land.

In Denmark this valuable fertilising agent is not allowed to run into the nearest ditch or pond; in fact

he who wasted it thus would be looked on as an agricultural lunatic. As I gathered, the manure, solid and liquid, from the 1200 pigs and the 400 cattle is sufficient to fertilise the entire farm of 1100 acres without the use of artificials.

Here is Mr. Pontoppidan's rotation of crops. First year, one-fourth of the area farmed, under mangold. Second year, oats laid down with clover seed. Third year, clover. Fourth year, oats. Fifth year, swedes. Sixth year, barley. Seventh year, rye. Eighth year, mixed corn, oats, barley, vetches, and peas, which are sown together and afterwards separated by a machine. This mixture is found to return a heavier crop than if its constituents were sown separately, as each kind of corn draws different elements from the soil. Also the oats and barley hold up the creeping vetches and peas.

I had a conversation with Mr. Pontoppidan on the subject of the State small-holdings. To ascertain the truth concerning these small-holdings, as to which I shall have much to say later, was the main object of my visit to Denmark, and therefore I sought to collect representative opinions respecting them upon all good occasions. I found that like almost every large landowner with whom I spoke, Mr. Pontoppidan regarded small-holdings with little favour. At least he stated that they do not prosper in his neighbourhood, chiefly because the small-holders can get no credit. He thought that to flourish such men ought not to rely upon their holdings solely, but rather to look upon them as an adjunct and to work for the larger farmers as well. These are views with which we are familiar in this country, and doubtless there is much truth in them. But as I must discuss the question at length

in its proper place, I will not deal with it further here.

Mr. Pontoppidan seemed inclined to agree with me that the Danish cows are kept too hot and not allowed sufficient air-space. I may add he informed me that he considered the sale value of his land to be 800 kroner, or £44, 6s. 8d. per tøndeland—say £33 per acre. This included “equipment,” by which I presume he meant buildings and other permanent improvements. If I am correct in this conclusion, the price about equals that of first-class agricultural land in England at the present time.

## AAGAARD

CONTINUING my journey northward, I observed that much of the country between Aarhus and Aalborg, a distance of about sixty miles as the crow flies, is by comparison quite hilly, and seems to be highly farmed with good root crops. Also there is a considerable area of woodlands, much of it under conifers of from thirty to fifty years of age. At Långaa, near the river, are large pastures backed by woods on which the black-and-white cattle graze untethered.

About the town of Randers the view is very wide and flat. Here the scene was beautiful in its own way at this hour of advancing night. Over the far-off waters of the fiord and the vast plain the light was dying. On the horizon the sky showed bands of smoky red fading above into shades of primrose and of green, a line of inky cloud ruled across them ; whilst against this broken sky a distant row of poplars stood out singly. The general effect of the quiet prospect was one of sadness.

From the prosperous seaport town of Aalborg I travelled to a remote estate in the far north-west of Jutland that is named Aagaard. Beyond Aalborg the land is very flat, having evidently been a sea-bottom in some past age. All about it stand scattered farmsteads, each of them equipped with a windmill for the purposes of pumping water and grinding corn, and surrounded by a little grove planted for shelter in this gale-swept land. The trees of these plantations

show by their shape that the prevailing wind is from the north-west.

In this district the soil is very light and sandy, but some corn is grown here, for in places the oats still stood on the fields. Peat seemed to be the common fuel, as piles of it were stacked beside each farm. Here and there on the flat landscape appeared the tall chimney of a butter-factory, and around it the cottages of small-holders where the "housemen," as they are called, and their womenfolk could be seen labouring on their strips of ground, for the most part at the digging of potatoes. Also I saw a man ploughing with three horses, and as he did so smoking an enormous china pipe.

After passing Brovst the soil grows more peaty and undulating. Here vast flocks of seagulls were feeding on the ploughs, which are intersected with heathland. Bulrushes grow in the numerous pools, but they are much shorter than those we see in England. I observed that the people at the stations were extraordinarily like those who may be met with on any country railroad in East Anglia.

Near Bonderup, or Peasant's Town, about twenty-seven miles from Aalborg, some afforestation is in progress. Here, too, many tumuli are to be seen, dating, I believe, from the Bronze Age or earlier, and in certain of these the central stone chamber where the remains of the deceased chief were deposited is exposed either by excavation or the washing of the rains for thousands of years.

The house at Aagaard, which means the Place of a Stream, is situated near the little town of Fjerritslev. It is an ancient place on a wide, wind-swept plain. In the wood hard by, encircled by the remains of a

double moat, lie the ruins of the old castle of the Gyldenstjernes, which was burnt in the peasants' war early in the fifteenth century, when its owner of that day had to leave it, says history, "with only his stick in his hand." Part of the oak posts of the drawbridge still stand in the garden of the house, as do the foundation walls of the keep, consisting of great boulders. The castle itself, however, was built of large, red bricks, of which some still lie about, although doubtless many were used in the construction of the present manor-house that was erected after the burning of the castle.

This house is a quaint place built on three sides of a square and having long passages and low, old-fashioned rooms adorned with ancient furniture and brass sconces on the walls. It is now owned by the two Misses Roulund, whose father bought the Gaard in 1847. Then the estate comprised some 1300 acres, but now it has been reduced to half that area.

About 300 yards to the south-east of the house stands an ancient range of farm buildings containing many enormous oak beams that evidently had been used before. Perhaps these came from the outbuildings of the old castle, or perhaps from some wrecked ship. The barn is huge, and contained all the harvest of the year. To the east of this barn the view is very striking in its own way. Here lies a flat plain called Lyrefald, where two battles were fought in the fifteenth century. After the first of these battles, in which the peasants were victorious, the castle was burnt, but in the second the aristocratic party had its revenge and defeated them.

Standing like sentinels upon this plain appear tumuli containing the remains of the owners of the

land who flourished long before Christ was born. Formerly there were many more of these tumuli, which have been levelled. When opened they were found to contain a few bones, and with them stone or bronze weapons and amber. Now, I am glad to say, any further destruction of such monuments has been forbidden, so there they stand in their solemn and pathetic loneliness, hiding the secrets of the race that reared them, of which they are the sole memorials. Those who built their monuments of earth were wise, since nothing that men's hands can raise endures so long.

Like most of the landowners in Denmark, the Misses Roulund farm all their own land. They keep twenty horses and one hundred and fifty head of black-and-white cattle, of which seventy are cows. All the milk is sent to a co-operative factory in which the Misses Roulund have shares. Their staff consists of twelve men, who live on the place and are helped by from two to six small-holders according to the season of the year. The foreman or steward receives £44, 6s. 8d. per annum with board and lodging, the under-foreman £22, 3s. 4d., and the other hands from £16, 10s. to £19, 10s. Boys are paid from £11 to £13, 15s. All of these are boarded and lodged. The small-holders or *husmaend* receive 1s. 8d. a day in summer, 2s. 3d. a day in harvest, and from 9½d. to 1s. 1½d. in winter. Also they are given a free house, free milk, free turf-fuel, and a small garden if they want it, which Miss Roulund informed me is not often the case.

She said that the labour is not so good as it used to be, since the rising generation does not take the same interest in its business as did their fathers before

them. The hours of work in summer are from six in the morning to seven in the evening, less two hours off at midday and two breaks of half-an-hour during the morning and afternoon respectively. In winter the men work from seven to five, with one hour off for dinner and a rest of half-an-hour during the morning. Miss Roulund stated that the price of land in the neighbourhood depends upon its quality, which differs very much, varying from £2, 15s. 6d. to £33 per tøndeland. She added that it is not worth more in this part of Jutland than it was twenty years ago, although the State values it at a higher figure.

The taxes also have risen and are said to be heavy. Thus Aagaard pays more than £110 in State and Communal charges. Notwithstanding all these drawbacks, her experience showed that it was possible to live out of the proceeds of such a property. Still, in her opinion, the smaller farms pay better, as they are easier to supervise. I may say that I heard this view expressed several times in Denmark. In these days when we are so often told that farming cannot be profitable except on a large scale, it struck me as being of interest.

Crossing the little stream from which the estate is named, we drove over a stretch of wind-swept and desolate plain to the neighbouring church of Gjøttrup. That building can be seen from a considerable distance, being well placed on a knoll of rising ground which doubtless was an island when much of this land was under water, as it is said to have been up to the time of the Romans.

I do not know at what exact period these Danish country churches were erected, but certainly they resemble each other very much. The square, wedge-



capped towers are extremely massive, and often, as in this case, constructed of large stones or boulders dug from the soil and whitewashed over, in a fashion likely to resist the attacks of time for very many centuries.

The church at Gjøttrup consists of a long nave and chancel. It is very neatly kept, but at some time, I should judge within the last century, the floor has been tiled so that all the graves which must lie beneath are hidden. Or perhaps when this was done the ancient tombstones were broken up and thrown away to make place for the new tiles. In some of the Danish towns I have seen these memorial stones, many of them of great interest, that once were within the churches, now set up against the outer walls, where they are in process of destruction by the weather.

At Gjøttrup, however, the beautiful carved and painted pulpit and reredos, given, as the inscriptions and armorial bearings show, by members of the Gyldenstjerne family in the sixteenth century, fortunately still remain quite uninjured, save for some nails driven in as supports for floral decorations. Indeed none of the Danish churches seem to have been injured by the violence of religious persons at the time of the Reformation or subsequently. Happily for itself, Denmark, unlike East Anglia, can boast no destroying Dowsings of accursed memory.

Also I visited the church of Kollerup some miles away, which, although larger, is of much the same character externally. What it is like within I cannot say, as unfortunately the key was not to be found, and time was lacking to send to the parsonage in search of it before the only available train departed.

• Thus all too soon my visit to this most interesting part of Jutland came to an end, and I bade farewell to our kind and charming hostesses, to the ancient and historical manor of Aagaard, its tumuli, and its battle-haunted plain, as I suppose for ever.

## COPENHAGEN

A NIGHT's journey on the steamboat *Cimbria* conveys the traveller from Aalborg to Copenhagen. As the object of these pages is to tell of the land and not of towns, of Copenhagen I will say only that it is a most thriving and beautiful city, adorned with many fine buildings. Indeed the number of these that have been completed recently, or are in course of completion, filled me with wonderment, and caused me to marvel how a country so small as Denmark can find the money to pay for them. I may add that so far as my opportunities of observation went, there is little of what we should call heavy goods traffic in the streets, although the transport of building material goes on continually. This, however, is a domestic matter into which it was no business of mine to make inquiries.

Another thing which struck me was that the movement of life in Copenhagen never seemed to cease. Thus at three in the morning when, on account of the noise, I rose to shut my window in the new and stately Palace Hotel, except that the trams had ceased to run for a few hours, I was surprised to see that everything in the Raadhus Plads beneath appeared to be much as it is in the daytime. There stood taxi-cabs waiting for their fares, there were pedestrians and even folk on bicycles. When I made inquiry on the point I was informed that certain restaurants do not close till 3 A.M., which

accounted for the local activity. This may be so, but at least it remains true that in Copenhagen a very small portion of the twenty-four hours appears to be devoted to repose.

Except in certain cities in the United States where there is no repose at all, I can remember none that I have visited in the world where the noise is more continuous at night and begins earlier in the morning than it does in the central part of Copenhagen.

Of the public institutions that I saw there, excepting those connected with agriculture and education, the museums appealed to me most, especially that which is called the National Museum. Here the housing of the collections struck me as inadequate and the lighting of some of the rooms as insufficient. But of those collections themselves, especially such of them as deal with prehistoric times, I can only say that I have never seen anything finer, and that their arrangement is beyond all praise.

One of the first visits that I paid in Copenhagen was to His Excellency Mr. Anders Nielsen, the Minister of Agriculture, to whom I had an introduction from the English Board of Agriculture. Mr. Nielsen, I may take this opportunity to say, is, I was informed, a gentleman who by his own ability has raised himself to his present high position. Indeed it is said that he began life as a thatcher.

In my interview with Mr. Nielsen, our conversation turned on the subject of the State small-holders. I told him that the principal object of my visit to Denmark was to ascertain what measure of success had attended the movement which had resulted in the creation of this class. I explained further that some-

thing of the sort was in contemplation in England, as one of the new planks in the platform of the Unionist party at present in opposition was the establishment upon the land of small freeholders, by the aid of money to be borrowed directly or indirectly from the State. Therefore it became a matter of importance to discover how such a system was working in what I believed to be the only country which had made a similar experiment.

Mr. Nielsen replied that he quite understood my object. He added that the Danish Government contemplated the appointment of a commission instructed to report as to whether State leaseholds should be substituted for, or established in addition to State freeholds. I said, "Does not the appointment of such a commission suggest that there is a doubt as to whether these State freeholds are successful in Denmark?"

He replied, "Yes, Mr. Haggard, there is a doubt."

In the course of further conversation I gathered that an idea is afoot that the glebe-lands, which the Danish clergy declare they cannot make remunerative, might be taken over and used for the purpose of such State leaseholds. But of all this matter I shall have more to say.

At the conclusion of our interview the Minister kindly handed me over to Mr. Knud Vallée, Secretary and Deputy in the Ministry of Agriculture; and to Mr. Waage, assistant in the Ministry of Agriculture, Director of Credit Banks of Communes in Denmark, and advocate.

## MR. WAAGE ON STATE SMALL-HOLDINGS AND CREDIT UNIONS

WHILE I was in Copenhagen I had two long and most interesting interviews with Mr. Waage, who for this purpose was so good as to visit me at my hotel. Mr. Waage, I should explain, is perhaps the first authority on State small-holdings in Denmark. Indeed it was his official duty to draft two of the three Small-holding Acts, namely, that of 1904 and that of 1909, and therefore his opinions on these and kindred matters are of the utmost value. I should state that, as I was informed, Mr. Waage is what we should here call an advanced Liberal in politics.

The title of the last law, that of 30th April 1909, with which I chiefly have to deal, is, as nearly as I can translate it, "A Law for the Creation of Housemen Holdings," the title in Danish being *Lov om Oprettelse af Husmandsbrug*.

As Mr. Waage explained to me, there have been three of these laws, each of them appointed to run for a period of five years. The first was passed in March 1899, and the last will expire in 1914. All three are essentially identical, their object being briefly to enable men, or in some instances women, of approved character and experience, to acquire a certain area of land in freehold by the aid of money advanced by the State, which money is to be repaid in a total period of ninety-eight years.

The laws differ, however, in the following particu-

lars. According to that of 1899, the cost price of the land must not exceed 4000 kroner, or £221, 13s. 4d., of which sum nine-tenths might be advanced by the State. Under that of 1904 the value of the property that might be purchased was raised to 5000 kroner, or £277, 1s. 8d., the proportion of the State advance remaining the same. According to that of 1909, land may be purchased to the value of 6500 kroner, or £360, 4s. 2d., the proportion of the State advance still being fixed at a maximum of nine-tenths.

Under these three Acts about 5000 State small-holders have been created up to the present time (1910). None of them give any right of compulsory purchase, which is unknown in Denmark. The would-be small-holder must buy the land by voluntary agreement with a willing seller.

Mr. Waage stated, in answer to my questions, that the success or otherwise of the experiment is a matter of opinion. It depended largely on the individual point of view from which it was considered. He pointed out that the prime cost of the land is raised by the operation of the law above its ordinary market value, as the owner, knowing that he has to do with an anxious buyer using State money, naturally holds out for a high figure.

I said that this seemed to show that such State small-holdings are not a practical proposition unless a power exists of compulsory purchase. He replied that this was his opinion, and that the lack of compulsory powers was the stumbling-block of the Act. Personally, he would prefer an Act like to that under which the County Councils in England can expropriate land and let it on long lease.

For his part, he wished also that some system

intermediate between freehold and leasehold could be found, under which a lease might be granted for the life of a man and his family at the very least. Still, he admitted that there is an antipathy to leaseholds in Denmark. He informed me that under the laws of 1899 and 1904 the only mortgage a State small-holder could obtain upon his land was one in favour of the State. In the law of 1909, however, this was altered; the upshot of the alteration being that the State small-holder is now able to raise further mortgages on the land which he has bought with the aid of public money.

I suggested that in these circumstances the whole scheme might ultimately break down, and he agreed with me. He added, however, that in practice more than nine-tenths of the value of the property cannot be secured on loan, but the trouble was that such provisions as those of the last Act opened the door to fraud. For this reason and for others he would prefer a lease for several lives, involving no repayment of capital sums to Government, but only that of an annual rent.

Although the actual result of the working of the Act of 1909 is not yet ascertained and remains in doubt, on various grounds he considered it the worst of the three. Thus much dissatisfaction is caused by the comparatively small proportion of the applicants to whom it is possible to give loans from the fund available, the rush being too great to enable all to be accommodated. Again, the 4000 kroner man created by the first Act of 1899, being unable to live entirely out of the proceeds of his holding, had to work for others as well as for himself and thereby earn outside money. But the 6000 kroner man created by the last



Act generally works only for himself. Therefore he becomes entirely dependent upon his holding, which does not always produce enough to support him and his family and to pay the instalments due to the State.

Further, although the law provides that the State small-holder must possess in cash one-tenth of the value of the holding, whereof nine-tenths are advanced by the State, a difficulty of the situation is that it is hard to discover whether he does really own this sum. In this connection it must be remembered that the State mortgage is over *all* the small-holder's possessions, as its advance pays not only for the land but for the house, equipment, stock, and implements.

With reference to the labour question as connected with State small-holdings, Mr. Waage said that in the beginning the large landowners feared lest the result of the Act should be that the State "houseman" might become too independent to do any outside work. Their views on this matter had, however, changed greatly in the course of the last ten years. He considered that the creation of these small-holders had helped rather than hindered the supply of labour, as many of them were glad to work for others in their spare time. Also young people grew up around the small-holder, who acquired a taste for and remained upon the land. Another advantage in the position of such a man is that he becomes a freeholder from the moment he takes possession by aid of public money. Still, Mr. Waage seemed to think that those individuals who succeed as State small-holders would have succeeded in any case through their own energy and efforts without the help of such public money.

On the occasion of my second interview with Mr. Waage, held to elucidate certain points that had arisen

in our first discussion, he elaborated his views in several directions, notably as regards his objections to the existing system.

First, he repeated that the "houseman" or freeholder must select his land himself, which in effect raises its price above that which would be paid were some system of compulsory expropriation in force. Secondly, he said that the power of obtaining State credit on such easy terms (namely, 3 per cent.) indirectly forces up the price of the land, as it makes the would-be purchaser more eager to buy and therefore willing to pay over the market value. Thirdly, that the law works unjustly, inasmuch as only a few can benefit, especially under the last Act, which raised the amount of the total loan obtainable, while many applicants of equal merit must be disappointed. As a matter of fact only three-eighths of the applications under the Act of 1909 could be considered. Fourthly, that the State itself cannot now borrow money at less than  $3\frac{1}{4}$  to  $3\frac{1}{2}$  per cent., whilst the loans to smallholders are made at 3 per cent. Therefore the loss must be met out of the pockets of the taxpayers, many of whom are quite as necessitous as the State smallholders. Thus an injustice is worked to the community in order to benefit a single class.

These, put concisely, were the adverse points which Mr. Waage had to advance against the Act of 1909.

On the general question he added some others. Thus he held that the proportion of cash supplied by the small-holder was too small, and that instead of one-tenth, a fourth or even a third of the total capital might reasonably be required of him. He said, however, that it should be borne in mind that many of the smallholders possess more money than the law

demands, the facts of the case being very difficult to discover.

His general view was adverse to the creation of State small-holders owning the freehold. He considered that under the existing economical conditions, these would have arisen by themselves without the aid of public money, especially in the case of men fitted to work them. He held that the best way for the State to help the small man would be by some system between freehold and leasehold, such as a long lease for several lives which would not result in artificially enhancing the price of land. He believed that the forthcoming commission to be appointed to consider such matters would work on these lines and towards these ends. The general opinion in Denmark, or at any rate a very extensive section of it, was that things could not go on as they were. Either the law would have to lapse at the expiration of the five years, or some modification of it must be devised. The first enthusiasm for that law was evaporating as its advocates discovered how few could be aided under its provisions. Therefore many of these had modified or were beginning to modify their views to the extent of desiring a change from freehold to long leasehold.

As regarded what that change should be, he suggested that the old Danish *faeste* tenure, that is, either a lease depending on the life of the tenant and his wife, or in some cases an hereditary or a continual lease, might be taken as a model and enlarged. An inheritable leasehold for several lives might be created at a fixed rent, but such rent could always be refixed when a new tenant entered into possession.

Lastly, in answer to a question from myself, Mr. Waage informed me that the State "houseman" is

recognised as a freeholder from the moment that he enters on his land.

Now I come to the method and scale of the repayment of the amount advanced to the small-holder by the State. These are rather intricate; indeed I fear that all this subject cannot be made otherwise than dull reading. Still, if it is seriously contemplated that such State small-holders are to be called into existence in this country, details of this nature are well worth the study of all concerned, and especially of those statesmen and reformers who advocate the movement. On their proper appreciation and application to local circumstances may possibly depend the success or failure of any system that is ultimately devised.

Three per cent. is the rate of interest, as distinct from sinking-fund, charged towards the repayment of capital. According to a provision of the Act, during the first five years this interest, but no capital, is payable. The total loan is divided into two parts, one of two-fifths and one of three-fifths. This three-fifths section of such loans is converted into a kind of public stock, and through the Mortgage Bank of Denmark is put upon the market with a State guarantee.

To return to the two-fifths section of the debt of any individual small-holder. After the five years of grace during which he pays 3 per cent. only, he must pay 1 per cent. more, which 1 per cent. accumulates as the sinking-fund for the redemption of the loan. This total of 4 per cent., however, he continues to pay throughout the entire period, with the result that as the borrowed capital shrinks through repayments, those repayments automatically increase in proportion year by year. When the two-fifths section

of the loan has been paid off in a period of forty-six and a half years, the three-fifths section is, or rather will be, dealt with in the same way. Thus the total loan will be liquidated in a term of ninety-three years, or, as no capital is repayable during the first five years, in ninety-eight years in all.

Of course it is far too early to know how all these elaborate arrangements will work out. Still, I may add that up to the present the State has only found it necessary to dispossess a very few small-holders, although a good many of these have already given up or transferred their holdings by private arrangement without the State incurring any loss.

## THE CREDIT-UNION BANKS

BEFORE I went to Denmark I was especially asked by those in authority, whose business it is to acquaint themselves with such matters, to ascertain :—

- (1) Whether any public authority, either Government or local, organises the Danish Credit Banks.
- (2) Whether any assistance is given to such Credit Banks by any authorities (a) by guarantee or loan, (b) by inspection or audit.

Accordingly I directed my inquiries particularly to these points.

To begin with, my impression was that in Denmark there were many Credit Banks on the Raffeisen system, which flourishes so greatly in some continental countries. Mr. Waage informed me, however, that no such banks exist in Denmark. What do exist are Credit-Union Banks, which to a certain extent are governed by the same principles. The Raffeisen scheme has been considered in Denmark on several occasions, but nothing has been done towards establishing it there, as it has been held that the local Saving Banks answer its purpose to a sufficient extent. These Saving Banks are not a State institution although they are inspected by the State. I did not gather that the position as regards inspection and guarantees against fraud is altogether satisfactory so far as the Saving Banks are concerned. At any rate

there have been several instances of the failure of such banks, and I believe that I am right in saying that one of them was involved in a recent and very notable scandal.

To return to the Credit-Union Banks. The answer to the questions set out above is :—

- (1) A Credit-Union Bank is a private institution, and is not organised by any public authority.
- (2) To the ordinary Credit-Union Banks no assistance is given from the State by means of guarantee or loan. But these are inspected and their accounts are continually audited by Government auditors as a safeguard against fraud.

There exist, however, other Credit Unions known as the Hausen Credit Unions, designed, as I understand, to advance funds to small-holders. These are founded on the same principles as the ordinary Credit Unions, with the important difference that the State guarantees the interest up to 4 per cent. Therefore the value of their bonds naturally stands higher than does that of those of the ordinary Credit Unions. I was informed by Mr. Waage that no losses have been incurred by the Credit Unions during the last fifty years, and that the Government is satisfied with their position.

In order that all this question may be made quite clear, I will now give a translation of the substance of a memorandum most kindly written for me upon the matter by Mr. Waage.

A Credit Union of landowners is formed with the object of securing for its members mortgages on their properties. This is done thus. A landowner who

desires to obtain a mortgage on his property gives a bond to the Union and receives the loan, not in cash but in bonds (*Obligationer*) issued by the Union. The receiver of these bonds must realise them by selling them on the money-market. Therefore the person to whom the loan is granted must bear the risk of the bonds not realising, on account of the fluctuations of the market, as much as he had expected to receive when he decided to take up the loan.

The interest and the sinking-fund charges that every member has to pay on his loan are used to meet the payments of interest and to cover the sinking-fund on the bonds issued by the Credit Union. The regulations of the Credit Unions must be approved by Government, and Government appoints an auditor to inspect the affairs of every Credit Union.

The Credit Unions will advance loans up to half the assessed value of any given property.

The person who obtains a loan has to pay a certain amount towards the reserve fund of the Credit Union by which it is granted. Also he must pay a small sum towards the administration expenses of the Union. In case of any losses being incurred, such losses are met out of the reserve fund. If the reserve fund should not be sufficient to cover the losses, these must be met by the members, the liability being equally divided among such members.

The members are jointly and severally responsible for the obligations of the Union. Only their real property is, however, liable; their other possessions are not liable.

These Credit Unions are specially adapted to a country where small-holders are numerous.



To this memorandum I should add that Mr. Waage informed me verbally that no capital is required to be put down on the formation of such a Union, and that the losses incurred are rare and insignificant. I believe also that the terms obtained by the borrowers are so advantageous that very many, if not most, of the landowners in Denmark appear, so far as I could gather, to take up some mortgage on their real property in order to furnish themselves with floating capital. In England a person rarely borrows upon the security of his land unless circumstances oblige him to do so. But in Denmark the case seems to be otherwise. Of course, however, I may be mistaken in this conclusion.

I add some further information on the interesting matter of these Credit Unions which I have obtained from other sources and believe to be reliable.

The two first Danish Credit Societies were founded in 1851. They are called the "Credit Society of the Danish Islands" and the "Credit Society of Real Estate Owners in Jutland," but since that time the number of such societies has increased considerably.

On the 1st of April 1910, the total of the loans advanced through the Credit Society of the Danish Islands was about £25,440,000, of which sum about £2,280,000 had been repaid. The number of its members amounted to about 33,000, and its reserve-fund stood at about £810,000.

The losses incurred during the period of the existence of the Society have been trifling. Not only has the reserve-fund been able to meet these losses with ease under regulations which provide that after it has attained a certain figure it shall apply part of the surplus in reduction of the debts of the members; it has also proved sufficient to benefit those members

by such contributions. The investment of capital in the bonds of this and other Credit Unions is considered in Denmark to afford a security of the highest class. Loans can be obtained from Credit Unions both on large and on small properties. The largest loan advanced by the Credit Society of the Danish Islands amounts to £94,400, but the sums lent are sometimes as small as £33. There exist, however, two if not more Credit Societies especially adapted to the wants of small-holders, which societies are more or less supported by a State guarantee.

The interest charged on Credit-Union loans, according to the list of the Copenhagen Exchange, varies from 3 to  $4\frac{1}{2}$  per cent. Of late years, owing, I suppose, to the increase in the value of money, the interest has risen to 4 or  $4\frac{1}{2}$  per cent., but fifteen or twenty years ago it was much lower. Interest and sinking-fund are payable simultaneously, the sinking-fund, which as a rule is 1 per cent., being added to the interest. A peculiarity of the method is, however, that the amount of the instalments repayable never decrease until the whole debt is discharged. As in the course of time less becomes payable on account of interest, more is paid on account of sinking-fund.

## MR. SCHOU ON STATE SMALL- HOLDINGS AND CO-OPERATION

As a pendant to the views of Mr. Waage I will give those of Mr. Rudolf Schou, *Conseiller du Gouvernement*, another high official of the Danish Department of Agriculture. With Mr. Schou, a gentleman whose well-known ability was very apparent to me, I had a long and interesting interview on matters connected with the land in Denmark, and more especially with the small-holding movement in that country.

He stated at once that he approved of this movement, although in his opinion the law of 1909 provided that too small a proportion of capital should be in the private possession of the State small-holder. He considered that a tenth of the total amount required was not sufficient to enable such a man to stock his farm properly and to stand the stress of accident or misfortunes. The fight was too hard. He pointed out that a man and his fiancée could save 400 kroner (or £22, 3s. 4d.) in two years out of the proceeds of their ordinary labour, which was all that the Act required. (There is a slight mistake here, as under the provisions of the 1909 Act, which allows property to be bought to the total value of 6500 kroner (or £360, 4s. 2d.), the tenth owned privately by the small-holder must be 650 kroner (or £36, os. 5d.). Still, the same principle applies *pro rata*.) In his view the small-holder's contribution (on the 4000 kroner basis) should be raised to 1500 kroner (or £83), that

is, about 37 per cent. of the State advance instead of 10 per cent. as at present.

I may say that this suggestion is one with which I entirely agree.

Also he endorsed Mr. Waage's point that the State small-holder obtains a considerable advantage over what may be called the natural small-holder, inasmuch as he gets the State at his back at a very low rate of interest. It seemed to him scarcely fair that the man who is made should be put in so much better a position than the man who makes himself—a proposition with which again I must agree.

On the general question Mr. Schou said that although some of the small-holders fail, as a rule they win through in the end. Also he considered that acre for acre they produce more than do the larger farmers, to which output must be added the work they do for others outside of their own holdings, that averages about 170 days in each year. The real *raison d'être* of the impulse towards small-holdings in Denmark was the desire of the peasants to stand on their own feet, or, as another gentleman put it to me, "to get their legs under their own table." It was an outward and visible sign of an inward and natural aspiration towards freedom. This resulted in a better population, as the children that such people bred were more industrious than those born in the towns. They kept in closer touch with nature, and therefore grew into finer men and women. The land-dweller had to think for himself and to do for himself. Town life was not true life, it was but a shadow and caricature of a rural existence.

As regarded the question of freehold versus long leasehold, his views differed from those of Mr. Waage.

In his opinion long leaseholds in the end meant a system of land nationalisation, since then the State or some other public authority must own the land. This he considered a dangerous innovation and one that might produce consequences at present unforeseen. Therefore the freehold system seemed safer and more in accordance with the teachings of experience. On the other hand, the advantage of a leasehold system was that an able and pushing man could move from farm to larger farm. The freeholder, on the contrary, in most cases remained tied to his freehold. Where he was, there he must stay till death, as even if he had the money to buy adjoining land, so soon as this became known the price would certainly be put up against him.

He added that in considering this question it should be remembered that a tenant or leaseholder in Denmark held himself to be in an inferior position to a freeholder, and therefore leaseholds would not succeed in that country. The real reason of the demand for their creation was political. Those who advocated them desired the nationalisation of the land.

Mr. Schou did not consider that in Denmark there is any real risk to the State owing to the possibility of the small-holdings created under the various Acts being ultimately thrown on to its hands. If their owners failed, such holdings were sold by auction, and the loss to the country, if any, was very small. Nor did he consider that the increase of such State small-holdings would adversely affect the labour supply.

Mr. Schou asserted that the condition of Danish agriculture is prosperous except in the case of the large farms, and that the little men and the small-holders made money, while the large farmers did not,

save perhaps where they chanced to grow sugar-beet. Why this should be so he did not know, but in support of his assertion he gave instances of which he had personal experience.

He thought that co-operation was at the bottom of the comparative success of Danish agriculture, which caused the price of land to rise in Denmark, whereas in England, where co-operation practically did not exist, it remained stationary or decreased. Co-operation, however, as he believed, could scarcely flourish where the land was hired and not owned. As all co-operative accounts were open to inspection, tenant farmers, if they chanced to be doing well, feared lest their landlords should come to know of their prosperity and take advantage of it to raise their rents. To flourish, co-operation must be practised amongst freeholders.

The real, underlying reason of the success of Danish agriculture, however, was that having no other resource the Danish people must rely on it for a living. Denmark had nothing to invest in except its land. In England things were different; there the land and agriculture were but side-issues.

In talking of the problem of free trade and protection, Mr. Schou remarked that there were no duties in Denmark on any ordinary food-stuffs, except a small one on cheese and on imported fruits such as oranges and apricots. Nor was there any import tax save a slight charge on machinery. The only other duties were 10 öre per lb. on sugar, which is largely produced in the country, and a trifle upon coal. (The excise charged upon the home-made beet-sugar is, I believe, 4 öre (or one halfpenny) per kilo or 2 lbs. Danish.)

I wish to call particular attention to this summary of the very shrewd and able views of Mr. Schou, and especially to what he says as to the difficulty, if not the impossibility, of persuading tenants to co-operate. My opinion on this matter coincides with that of Mr. Schou, but I reserve discussion of it till a later chapter in this book.

## THE STATE SMALL-HOLDINGS

DURING my stay in Copenhagen I was most kindly conducted, as the guest of the Department of Agriculture, on a tour of investigation of the State small-holdings in the neighbourhood of Roskilde. We went by motor, as this was practically the only way to reach them, my companions being Mr. Vallée, Mr. Waage, and Mr. Niels Mortensen, himself a successful small-holder, who is the chairman of the Small-holding Commission in that district. His Excellency the Minister for Agriculture was coming also, but unfortunately a Council of State prevented him. This I much regret, as I should like to have heard more of his views upon the question generally.

I now propose to give some account of the men I visited, as long experience in this kind of investigation has taught me that the only way to get at the truth as to the prosperity or otherwise of any branch of agriculture anywhere, is to examine into it with one's own eyes. Learned treatises and the views of official gentlemen or experts are very well and a great help, but to understand things it is necessary to see the farms or holdings and the actual men who work them.

Before I went to Denmark I was informed in one or two agricultural papers that my visit was unnecessary, as everything about that country is quite well known already. It may be so, but at any rate it was not known to me, who had read everything on the



subject upon which I could lay hands. From such reading I gathered, it is true, certain general ideas; for instance, that co-operation was largely practised in Denmark, and that there were many small-holders in the country where agriculture was strangely prosperous. But in the light of the experience that I gained in the course of my investigations on the spot, I can say honestly that until these were made I understood little of the local conditions. Further, I had no idea of the great lessons that are to be learned from those conditions, which have, as a matter of fact, shown me the answers to problems that I have studied for years without being able to be sure of their solution.

On these grounds, then, I determined that I would not leave the country until I had personally interviewed some of these State small-holders; had seen their land and heard their stories from their own lips. Here I may add that the men I visited on this particular journey, as Mr. Mortensen assured me in answer to my specific questions, were neither the worst nor the best of the State small-holders in that part of Denmark. They were, he said, a fair sample, selected for the most part because their holdings lay near the road and were therefore easy of access.

The first holder whom I saw, a hard, sturdy-looking man of about fifty, was Mr. Ole Larsen of Sallöv, by Gadstrup, who owns five tøndeland, that is about six acres and a half, which he bought in 1905 with the aid of a State loan of 4000 kroner (or £221, 13s. 4d.), at a cost of 500 kroner (or about £27, 10s.) per tøndeland, say £25 the acre. He informed me that when he entered on the holding he possessed a capital of 1100 kroner (about £61), which he had saved as an agri-

cultural labourer. Mr. Larsen is a man of standing in his way, being a member of the Parish Council. He has a wife, but no children. He built the house and buildings at a cost of 2400 kroner (£133), I believe largely by his own labour ; indeed if it were otherwise, I am sure I do not know how he did it for the money. At the time of my visit he was engaged in putting up an excellent cart-shed with his own hands.

His house was erected under the supervision of the Small-holdings Commission for the Roskilde District, to which all drawings and plans for such dwellings must be submitted. It is thatched, and comprises under one long roof the dwelling-place, a store-room containing a chaff-cutter, and beyond this the cow-house and pigstye. In the dwelling are two sitting-rooms, a kitchen at the back with a copper and stove, and, as this couple have no children, one bedroom. If there were children the second sitting-room would be used as a sleeping chamber.

The cow-house, which is good and suitable, has accommodation for four cows and one horse. In the piggery, that is roofed over as is usual in Denmark, were a fine sow, ten growing and four young pigs of the Danish breed. Here I saw a new thing, a half-grown female pig with two well-developed teats hanging from its throat. I was told that this phenomenon was very rare, but does occasionally occur in the Danish breed, both with male and female animals. It seems that pigs have been known to suckle their young from these false teats.

In addition to these pigs and sixty fowls, Mr. Larsen's stock consisted of four good red Danish cows, three of which stood blanketed in a field. These he said he had bought out of his private

means. Also he had a horse, an aged but useful animal, lightly built though sufficiently strong for his land. It cost him 300 kroner (£16, 12s. 6d.). The milk goes to a co-operative dairy which stands about half a mile away. In 1909 Mr. Larsen's cows produced 30,000 lbs. Danish, which he sold for 1200 kroner (£66, 10s.), plus the value of the skim milk which was returned to him. Also in that year he sold pigs to the value of 2600 kroner (£144) and purchased cake and other feeding-stuffs at a cost of 2500 kroner (£138, 10s.). He told me that during the previous two years, after paying his interest to the State, there had been "a bit over." As a matter of fact, in 1909 this "bit" amounted to a surplus of 800 kroner (£44, 6s. 8d.).

Mr. Mortensen, who heard this statement, added that he also had himself saved money out of a similar holding.

Mr. Larsen said that he looked to his cows, pigs, and poultry for his income, as he sold no corn. The pigs, like the milk, went to a co-operative society, but the eggs he disposed of privately. He buys his artificial manure (super-phosphates) and calf-cake through another co-operative society. Among his implements I saw a waggon that cost 170 kroner (£9, 8s. 6d.), a market-cart bought second-hand for 120 kroner (£6, 13s.), and a corn-dressing machine, besides a plough, a roller, and two sets of harrows, all designed to be drawn by one horse. He borrowed his liquid-manure apparatus from a neighbour.

I inspected this article, which, in view of the considerable cost of such machines in England (my own came to about £22), deserves a few words of description, especially as all I saw in Denmark were of the

same pattern. It consisted of a long coopered tub measuring about nine feet by three, which tubs can be purchased for 30 kroner (£1, 13s.). This is placed in one of the narrow-bottomed Danish waggons and pumped full of the fluid, which, by means of a simple sluice-door behind, it discharges in a copious stream on the land as the waggon is drawn forward. This stuff is applied much more liberally than our carts are designed to do. Mr. Larsen said that it is best used in spring and autumn and after rain. Even on this small-holding there is a good liquid-manure tank holding 96 cartloads of 140 litres to the load, and fitted with a proper pump.

I went over Mr. Larsen's land very carefully, being anxious to ascertain how it was managed. He called it good and heavy, but I should describe it as light. Indeed it must be light, since otherwise one rather slenderly built horse could not drag a plough through it. Near to the buildings were three small stacks --one of barley, one of barley and oats mixed, and one of oats. Beyond these was first a strip of very good swedes and beet, about an acre in all. Then came another strip from which a mixed crop of barley and oats had been taken. This was sown down for clover hay, and on it the blanketed cows were tethered. Next in succession was plough-land already drilled with rye after oats and vetches, then mustard for cow food after rye, a patch of beet and a barley stubble. All of these were clean and in good heart. The little farm is divided into eight portions of about three-quarters of an acre each, worked in the following rotation: (1) oats, peas, and vetches mixed for "stable food"; (2) rye; (3) roots; (4) barley; (5) roots; (6) barley sown down with clover and mixed seeds; (7 and 8) clover.

Mr. Larsen and his wife do all the work of the holding without assistance, but he does not undertake any outside labour. He told me that he gets on well and is perfectly satisfied, adding with emphasis that he much preferred his present position to that which he used to occupy as a labourer. Certainly he seemed to be prosperous in a small way ; and as we sat down to partake of the lunch of coffee, beer, &c. which Mrs. Larsen had hospitably provided, the air of solid comfort about the place struck me very much. It was a little astonishing also to be warmly thanked by a man in this position for the pleasure that he said he had experienced in reading works of mine that do not deal with agriculture. I do not think that a foreign writer visiting a small-holder in England would be likely to meet with this particular surprise. In Denmark, however, it is otherwise, for there among the peasant class he may find that he is as well or even better known than it is his fortune to be at home. The Danes are great readers of such fiction as appeals to them.

Before I parted from Mr. Larsen I had a private conversation with him on the subject of State small-holders generally. He told me that in his opinion about half of these really succeed. One-third just get on, and the rest are unsuccessful. It was entirely a question of the man himself. If he were the right man in the right place things would go well. If not, he would fail. He thought that the movement would spread, which he feared would cause the land to become too expensive. Thus he said that in this part of Seeland it used to be possible to buy ground at 500 kroner (£27, 14s.) the tøndeland, whereas now it cost 700 kroner (£38, 15s. 10d.).

· Leaving Mr. Larsen's house, we proceeded to another State small-holding near by which belongs to Mr. Anders Andersen. Mr. Andersen was away from home working for somebody else, so we interviewed his wife. She told me that they came into occupation of the holding five years ago. It was bought with the house and implements, but without stock, for 6100 kroner (£338) by aid of a State loan. The former owner was also a small-holder, who could not get on, either because he was not hard-working or sufficiently intelligent. Mr. Andersen first saved a little as a labourer, then took up some land, and afterwards moved on to this holding, which is larger.

His wife informed me that she liked the place, and that they were getting on fairly well. At the time of our visit, however, she was somewhat depressed, as two of their pigs were ill with cramp, which to them was a very serious matter. Their stock consisted of four cows, a calf, and five pigs; but having no horse they were obliged to hire one for ploughing. She said sadly that they wanted a horse very much indeed, even if it were only an Iceland pony, such as many of these small-holders use. The harvest had been good, and they had three stacks of corn, also a nice piece of roots.

Their house was smaller than Mr. Larsen's, consisting of two rooms, with a granary adjoining that could be turned into dwelling space if necessary. This they did not need at present, as they only had one small boy at home. There was a cow-house for four beasts, and the usual piggery. I asked if the drinking well were not somewhat too near these outbuildings, and was told that it had been cemented. When the same question was put to another small-

holder, he replied he had not noticed that the water made the pigs ill!

My general impression was that these people were not quite so flourishing as the Larsens. It appeared, however, that they took over their land in very bad order. Also Mrs. Andersen was evidently much depressed by the sickness amongst her pigs. Still Mr. Mortensen thought that they would get on well, as the man was steady and reliable.

Our next visit was to Mr. H. P. Nielsen of Tjaereby, a middle-aged and capable man with a lame foot, who owns five tøndeland, which he bought with the aid of a State loan of 5000 kroner (£277), at a cost of 600 kroner (£33, 5s.) per tøndeland, inclusive of the standing crops. He began with a private capital of about 1000 kroner (£55, 8s. 4d.), which he had saved as a labourer and shoemaker, for he combined both callings. The house, a good one, and buildings he erected at a cost of 3500 kroner (about £194). Mr. Nielsen, who is a member of the Parish and other local Councils, informed me that he was quite satisfied with his position, was getting on well, and after three years' experience of his holding looked forward with confidence to the future. His stock consisted of three cows, a calf, a horse, four pigs, two sows, and thirty fowls. All his milk and other produce were sold through co-operative societies.

The buildings on this place are excellent of their sort and very clean, the liquid-manure tank being so arranged as to form a base for the straw stacks. The land, a medium loam, was clean and well cultivated; it bore good crops of roots, including carrots. Also there was a nice garden, and in it were three

large hives of bees. Mr. Nielsen had four children, but these were grown up and away. I gathered that he and his wife did all the work of the place, with the result that he now has little time to earn extra money by shoemaking. That on the whole he had no cause to complain was shown by the fact that he has been able to live out of his holding, and in addition to repay debt to the amount of about 300 kroner (£16, 12s. 6d.) a year.

Another State small-holder whom I saw was named Anders Frandsen, who lived at a place called Svogerslev Mark. He and his wife were elderly people, and with them resided his mother, an old lady of eighty-five, and a young son, who was sick in bed. By the way, all the family, including the old mother and the boy, slept together in one not very large room! Why they did this I do not know, as the house is the best of those that I visited on this journey, and has very good outbuildings.

Mr. Frandsen borrowed 4300 kroner (£238, 5s.) when he bought his property of six tøndeland five years previously, but was applying for an additional State loan. He began with three cows, but at the time of my visit had seven cattle, also a sow, four pigs, and two good horses. Originally he was a butcher and stockbreeder, but possessed only a little capital when he entered on his small-holding.

He told me that he was well satisfied, and could earn a living and pay his way, although whatever more he could make went to buy stock and refund debt. He bought and sold everything through co-operative societies, and expressed the opinion, which Mr. Mortensen endorsed, that the small-holding movement in Denmark would be impossible without the help of



such societies. Indeed, Mr. Mortensen added that it would be difficult for Danish agriculture generally to succeed in their absence.

Mr. Frandsen, a very intelligent man, informed me that he thought the State small-holders as a body were getting on fairly well. Still the start was difficult, and it was necessary for a man to possess rather more than the tenth of the capital which the law prescribes. This, I think, from the appearance of the place, must have been his own case. He said, what I could well believe, that if he were to sell out he would find himself considerably in pocket on the whole transaction.

I think that the reader will agree with me that on the whole these examples of Danish State small-holders had a satisfactory tale to tell, especially when Mr. Mortensen's assurance is borne in mind, that they were neither better nor worse than the average of their class. Still I imagine that Mr. Larsen's estimate that about one-half of such people really succeed, while a third only just get on and the remainder fail, is on the whole quite accurate. Indeed, in the circumstances, I do not see how it could be otherwise, since even with the powerful aid of co-operation the fight must be very hard, and one in which only good men can win a decisive victory.

In considering this question, I think we should remember that the part of it which is concerned with public policy, namely, whether such men should have freeholds or leaseholds, must be kept apart from the matter of the actual success or otherwise of those men. At present it can make little financial difference to such people whether they are freeholders or lease-

holders with a fixed tenure, since as leaseholders I do not suppose that they would be called on to pay much, if anything, less than they do now under a system by which they purchase a holding in about a hundred years.

Of course there remains the problem of the rise in the price of land owing to the demand that is thus created. But if a change were made from freehold to leasehold, the land would still have to be found somewhere by Government or other public bodies, and therefore, without the aid of an Expropriation Act, in a country like Denmark where it is so limited in extent, would still rise in value. The point for present consideration, therefore, is whether the State small-holder does or does not succeed as an agriculturist. To me the answer seems to be that undoubtedly he does to a very considerable extent.

On one subject, however, I am perfectly clear in my own mind, that were it not for the elaborate Danish system of co-operation he would fail miserably. By co-operation he lives and moves and has his being. Also I consider that he ought to possess a good deal more than a tenth of the total capital, for if this were so his struggle would be much less hard and the proportion of failures would be far fewer. These are points that will have to be kept steadily in view should the establishment of such a class of freeholders, or even of leaseholders, aided by State money, ever come up for practical consideration in Great Britain.

One thing more. The reader of these pages may say with justice that obviously there exists a great body of opinion in Denmark which is altogether adverse to and has not the slightest faith in the State small-holding movement. This is perfectly true. I

do not think that I spoke to any large landowner or large farmer—for in Denmark the two are practically identical—who was enthusiastic about this movement, while most of them were distinctly averse to it. Still this unanimity of hostile opinion should be heavily discounted, for the reason that in every country with which I am acquainted, not excluding England, the large farmer looks on the small-holder with strong dislike and quite apart from the question of whether or no his existence is a benefit to the community as a whole. Circumstances, into which I will not enter now, make it more or less natural that he should do so; or even if this statement is disputed, the fact remains that he does.

Here is an example which I quote from *The Times* of February 21, 1911. The report says:—

“There were unusual incidents at the sale at Crewe yesterday of a further instalment of Lord Tollemache’s Cheshire estate. Among the prospective buyers was the Cheshire County Council, which requires land for the furtherance of its small-holding scheme. The bidding on behalf of the Council provoked an unfriendly demonstration by the large company of farmers present, who hooted the Council’s representatives so vigorously as to call forth a strong protest from Mr. Manley, the auctioneer.”

It will be noted that the above does not refer to a case in which land actually in the occupation of a tenant is being compulsorily seized for the purpose of small-holdings. Had it done so the demonstration need scarcely excite remark, seeing that there can be but few things more irritating or in most cases more injurious to farmers, than that a portion of their land should be forcibly taken away from them for the benefit of other people. On the contrary, all that the County Council did was to try to buy land in the open

market, which it proposed to use for the purposes of small-holdings.

The inference is obvious and need not be emphasised. Still, such a state of feeling is as unfortunate as it is unnecessary, seeing that in the wide land of Britain there is room for every class of agriculturist. No one in his senses would urge that all England, or even half of it, should be cut up into small tenancies or ownerships. Yet that is what the large farmer too often seems to fear.

## THE RINGSTED HOUSEMEN'S SCHOOL AND BACON FACTORY

WHILST on this motor tour I visited two very interesting institutions at Ringsted, namely, the Husmandskole, or School for Housemen, and the Co-operative Bacon Factory. The Husmandskole is one of three on the same plan that exist in Denmark, the other two being in Jutland and in Fyen respectively. I was told that the idea of them was originated by Mr. Nielsen-Klodskov, the gentleman who most kindly showed me over the establishment.

The object of these schools is to train small-holders in such a fashion that they may become successful at their business. That at Ringsted, which was founded in 1903, has accommodation for 200 men and women, and during the seven years of its existence has instructed about 5000 pupils, the course occupying from five to six months. The school was originally granted a State loan of 60,000 kroner (£3325). Also it received a gift of 50,000 kroner (£2770, 16s. 8d.) from a private person; and in addition, other individuals, farmers and townsfolk interested in the work, have guaranteed a further loan of 15,000 kroner (£831, 5s.). In this year, 1910, the school with its experimental farm of 95 tøndeland is valued at 400,000 kroner (£22,166, 13s. 4d.), and insured for 300,000 kroner (£16,625). Moreover, now it pays its way.

There is a summer and a winter session, and as it chanced, fortunately, the day upon which I visited the

place was the last of the summer course. That of winter begins in November. The fees payable by pupils amount to 40 kroner (under £2, 5s.) per month, in return for which these receive their instruction, board, and washing. They must, however, bring their own bed-linen. The sleeping-rooms are arranged to hold one, two, three, or four pupils, but I gathered that something extra is paid for single and double rooms.

The lowest age at which pupils are received is eighteen years. Above this there is no limit; indeed persons of seventy have gone through the course, which proves how remarkable is the thirst for learning in Denmark. I wonder whether any septuagenarian has ever been known to return to school in England.

I think that I am right in saying there are no examinations, a fact which deprives such an institution of half its terrors. In this country, as I daresay may also be the case in others, we ride the competitive examination hobby very hard, which personally I think a great mistake. There are many of us who even in our age would be glad of the opportunity to learn something at a college—let us say Egyptian theology and hieroglyphics—if at the beginning of the business we did not find that it was necessary to pass an examination in vulgar fractions or the dates of the kings of England.

I remember that this was a reflection which struck me with some force when, after having been the Master of the High Court of the Transvaal, the guardian of all the orphans in that Territory and the founder of the legal practice there concerning these matters—in short, a person administering considerable

affairs—before I could be allowed to study for the English Bar I was called upon to show myself competent in this particular of elementary English history and some other schoolboy subjects. I succeeded in the effort, mastering, as I remember, more Latin in a month than ever I had done in all my years at school. Still, I think the Danish system is wiser. If a man wishes to learn, let him learn; if he does not, who is the worse except himself? Examinations, with their resultant system of “cramming,” especially if competitive, mar as many men as ever they make, and in my belief are about as bad a test of real proficiency, to say nothing of mental strength and originality, as has ever been conceived. Still, in crowded lands some means of exclusion must be found. I apologise for this unpremeditated digression.

To return. The students at the Ringsted Housemen's School are instructed, among other things, in the theory and practice of agriculture, gardening, poultry and rabbit keeping, the care of cattle, the relative values and action of manures; and in the case of women, in sewing, housekeeping, and home nursing.

By way of exercise they practise gymnastics to a considerable extent. Indeed on this breaking-up day, which is called the annual meeting, an athletic exhibition was going on in the gymnasium in the presence of a gathering of the friends of the students. The feats performed here, which I will not stop to describe, were really remarkable; indeed outside of a circus I never saw anything like them.

Leaving the gymnasium we inspected the dining and teachers' rooms, and passed on to the visiting room. Here were exhibited specimens of furniture designed to suit the cottages of small-holders. Some

of these were really charming, especially a couch-chair with finials fashioned in the shape of owls. Although in such excellent taste, all these articles were very inexpensive.

In what is called the House-mother's School was an exhibition of work made by the women pupils during the past summer. This included dresses, brodered clothes, pillow covers, stockings, under-linen, and so forth. In another room were cooked foods, cream tarts, bottled fruit, peas, rhubarb, plums, gooseberries, raspberries, and beans. Also there were fresh salads of all kinds. In yet another room were many varieties of brushes made by the girl-pupils and specimens of books bound by them. This is work that men only do in winter. On the centre table of this room was honey, both run and in the comb, taken from the school hives. In yet other rooms were samples of the fruit grown in the garden and on the experimental plots, including some excellent apples and pears, magnified drawings of insects that injure vegetables and fruit-trees, and instruments which are used in various experiments. Altogether the exhibition was as interesting as it was extensive.

Before we left, the young women pupils gathered by the front door and sang us some Danish songs that were delightful to hear. This was the finale, and, much edified, we departed amidst cheers.

I have never heard of any institution in England that at all resembles these schools for small-holders, and if such existed I do not suppose that many of our small-holders, male or female, present or prospective, would take advantage of the instruction they offered, even if this were available without cost to themselves



The Ringsted Co-operative Bacon Factory was started in 1896 with a membership of 994. In 1910 its members numbered 3046, and in the previous year it slaughtered no less than 48,000 pigs, many of which doubtless have been consumed by readers of this book in England.

First the visitor enters a stone hall in which are suspended dozens of white and silent pigs. There is something very solemn and impressive about the severe architecture of this place and its vistas of departed pigs and cattle, for there were also a few of the latter animals. Everywhere one looked appeared dead pigs haunting the shadows of the dark, cool hall in which death rules continually. But there are worse chambers a little further on, in one of which, appropriately robed, stands a learned man whose duty it is day by day to pass judgment upon the interiors of swine. These are brought before him in endless succession that his skilled eye may determine whether the late pig's health was all that it should be. He reminded me of a Roman augur reading omens in the entrails of the victims, a proceeding about which there must have been just the same air of horror and solemnity. I confess, however, that I am not well qualified to describe these ceremonies, since one glance was enough for me; after that I fled.

I was informed that this gentleman—I do not know his right title, so I will call him the Augur—is very highly paid. I do not wonder at this, for ever since I have been marvelling as to what exact sum per annum would tempt me to undertake the duties of his office. Of course the reason of his presence is that dead pigs which go out of Denmark in the way of trade must be, like Cæsar's wife, above suspicion.

On this the Government insists lest the national reputation should suffer.

Then there are other halls—the place of sacrifice itself I did not enter—some of which reminded me faintly of the vaults of the Royal College of Surgeons in Lincoln's Inn Fields, an extensive mortuary or cooling-chamber, for instance, where pigs which have been certified as blameless spend their last twenty-four hours in a natural shape, growing ever more icy and rigid. Also a kind of shadowed temple may be seen—it gave me the impression of being underground—which for sole furniture has five huge cement vats. These look innocent if a little heavy, but as a matter of fact pickling within lie the remains of hundreds of dismembered pigs.

For four days they pickle in the brine, for three they drain upon the floor. There was a faint odour about this place, not an unpleasant but a suggestive odour that I shall never quite forget. It brought to my mind the account by Herodotus of the embalming halls of the ancient Egyptians. I expect that their vats, if smaller, were designed upon the same plan, only the pickle which the embalmers used was natron.

After this the lard-store—a good pig should produce from 4 to 5 lbs. of lard—seemed quite a cheerful spot with its decorations of filled bladders in festoons.

To tell the truth, I was not sorry to escape from that factory, for here was too much death. Of course it is quite necessary death, and everything is as well arranged as it possibly can be by the aid of science and experience; but the fact remains that the preparation of our animal-food supplies after they have left the farm is not an agreeable subject to investigate.

I had other opportunities in Denmark of inspecting more such factories, but I did not avail myself of them. Following the Latin adage, from one I was content to judge of all.

The bacon manufactured in this factory is sent to England green and there smoked. London buys smoked bacon, the North of England prefers its rashers green. The average weight of the pigs killed is 135 lbs. Danish.

## TWO FAMOUS CHURCHES

AFTER the small-holders' school and the bacon factory, both of them so intensely modern, I visited the church at Ringsted and found the contrast grateful. It is a beautiful brick building dating from the eleventh century—Benedictine, I believe—and full of antiquities. Here lie some of the early Danish kings buried in leather sacks and laid without coffins in narrow arched vaults of brickwork. I was shown hair from the head of one of the queens, and casts of the skulls with perfect teeth. Also there is a wonderful brass of a certain Eric and his consort whereon the faces are inlaid in white marble, the finest perhaps that I ever saw. I do not think, however, that this was the same King Eric who was murdered by his brother Abel in 1250, who also lies here. Abel—he should have been christened Cain—joined him later, having been killed in war; and so great a disturbance did his ghost make in the church, especially at night, that another king caused his body to be dug up and thrown into a swamp.

The arms of the old nobility of hundreds of years ago, painted high up upon the walls, are a unique feature of this church. In one of these gentlemen I chanced to be interested. He died about 1500, and I was glad to learn that his bones are in excellent condition, although his coffin has crumbled away; also to inspect the gold coat-of-arms taken from his grave, and now kept with others under a glass case.

Another still more remarkable church is the cathedral of Roskilde, which is of much the same period, although it has been more altered. Here lie kings without number, all, or nearly all, in coffins above ground, the vaults below being full of minor royalties. Indeed the whole church is so crowded with the remains of departed majesty that I understand it has become a question where more of them are to find place.

It is a strange sight to see these sarcophagi, some of them hundreds of years old, standing upon the floors of the various chapels, and often still decorated with gold and silver wreaths and insignia. I presume that the velvet covering some of these coffins must have been renewed, for it seems wonderfully fresh.

The spectacle of the poor, earthly relics of all this departed grandeur is in its way impressive, and one that suggests the common reflections with more than common force. Were I a king, however, I think that I should prefer to be laid deep underground, lest in the end my fate might be that of the heart of Louis XIV., or of the mighty Pharaohs of Egypt.

What would *le Roi Soleil* have said could he have known the fate of that proud heart of his? What would have been the thought of Rameses had any of his magicians foretold to him that a day would come when his royal shape—and it is royal still—would be exposed half-naked in the glass case of a museum, to be the wonder, and sometimes the mock, of tourists? Yes, certainly I should prefer to be buried deep or burned to ashes and scattered on the earth, since at last, although that fate be delayed for thousands of years, will come the antiquarian, or the savage mob, or the drunken soldiery of the foe

to drag forth and make a peep-show, or a sacrifice, or a mock of flesh that once was revered as half divine. But this lesson is never learned, and so it comes about that the proud emperors of one millennium furnish the museums of those that follow.

## THE COPENHAGEN MILK-SUPPLY COMPANY

I do not think that in all my stay in Denmark I spent two more interesting hours than those which I passed in the company of Mr. and Mrs. Busck inspecting the premises and work of the Copenhagen Milk-supply Company. They were late hours, for I arrived there after ten and departed after twelve at night, since this is the time when the establishment is most busy.

Mr. Busck told me that this company was founded by him thirty-two years ago with a capital of £500, on which sum I believe it began its work in a cellar. To-day the capital is £25,000, and the cellar has been transformed into great buildings of many departments. It may be convenient to add here that the company is philanthropic in its aims. Thus it never takes more than 5 per cent. in dividends. Anything earned over that sum either goes towards the expense of increased buildings, &c., or is spent in milk given to the poor at a reduced price, or at no price at all.

To give a general idea of the size of the business I may add that about 170 people are employed in the buildings, while the total number of the company's servants amounts to about 400.

Before describing this great institution, I should state that thirty-four years ago the milk supply of Copenhagen was in a shocking condition, probably

even worse than that of some of our own English towns at the same period and later. The cows seem for the most part to have been kept as an adjunct to distilleries in Copenhagen, on the refuse of which they were fed. Moreover, they lived in dirty stables without light or air, where the veterinary never showed his face. Outside the city the conditions of cow-life appear to have been little better.

The distribution of milk also left much to be desired. Generally it was treated with borax or bi-carbonate of soda, or other preservatives calculated to prevent it from going sour and to conceal its age, and hawked about "warm from the cow" in buckets whence the vendor dispensed it with a dusty, germ-infected ladle. It is needless to add that in those times the infant mortality in Copenhagen was high.

On a certain day Mr. Busck, an exporter of tinned butter in Copenhagen, noticed that one of his workmen looked very depressed, and inquired the reason. The man answered that he had a sick child at home who, he thought, was going to die. He added that if he could only get really good milk he believed that its life might be saved. But where was that to be found in Copenhagen? Only that morning the distiller from whom he bought his milk, such as it was, had refused it to his son on the ground that he, the father, never came to drink spirits at his bar.

This was the spark that fired Mr. Busck's imagination and resulted in his founding, with the help of others, the great business which I am about to describe.

I am sorry to say that I forgot to ask what happened to the child in question. Let us hope that it



lived after all, but if it died, since that day its sacrifice has redeemed the lives of thousands.

So the society was constituted and took for its motto—"Pure Milk from Healthy Cows." At first it had many struggles, but by degrees it triumphed over them all, till at length it has risen to its present pre-eminence of utility. It should be stated here that it makes no fancy charges for its products. The best milk is supplied at the same price as ordinary milk commands elsewhere in Denmark. Then there is a children's milk and a specially prepared infants' milk, which of course cost more.

The company owns no cows. All the milk comes from forty selected farms that graze something over 5000 cows. Two of these farms I saw, and will speak of later. Also I hope to publish in an appendix the regulations and conditions under which the milk is supplied (see Appendix A). I recommend them as a counsel of perfection to English dairy-farmers, not excepting myself, but what would happen if we were asked to sign them I am sure I do not know.

The first thing to be seen at the *dépôt* is the milk coming in by train in special vans belonging to the company; 6000 gallons of it arrive every day in sealed cans. From the vans these cans are run on to weighing-machines and the weight of each is noted, together with the name of the farmer from whom it comes. Then they are opened, and a sample taken from each is handed to an expert woman, of whom there were two on duty on this particular night, who first smells and then tastes it. So skilled are these women, who only work for an hour at a time, that they can detect the slightest thing wrong in the quality of the milk. Other samples are taken also

to be scientifically tested, and of course any milk that falls under suspicion, which it does but rarely, is set aside. This milk when it arrives cannot be described as "warm from the cow," as I was told that owing to its preliminary treatment on the farms, its temperature is generally about 40° Fahrenheit.

After testing, the cans are emptied through a sieve into vats. Near to these is another great vat filled with a mixture of two parts of ice to one of salt and water. This stuff is pumped into what are called Laurence coolers that stand about twelve feet high, over which coolers the milk is also pumped, leaving them at a temperature of 40° Fahrenheit. Next it runs into an enamelled tank, whence it is forced through a filter of cloths and fine gravel, which gravel is sterilised every day after use. Thence it travels into large tanks, whence it is drawn about three in the morning for distribution amongst the customers of the company, by means of special carts, which I will describe later. It is not "pasteurised" in any way.

Mr. Busck emphatically disapproves of all such sterilising or pasteurisation, which, he said, kills everything that is good in the milk, including the lactic-acid bacteria, and makes it unwholesome for children. He told me, moreover, that whereas ordinary sour milk can be detected by its taste, sterilised milk will go rotten without advertising the fact in this way, and therefore is particularly dangerous.

I suggested to him that notwithstanding all his multifarious precautions, disease germs, such as those of typhoid or scarlet fever, might creep into his milk and remain unscotched by any treatment that it receives. He answered that this was so; that risk must be taken. Still I did not gather that anything

of the kind has happened in the experience of the company. It must be borne in mind, however, that there are other establishments of this sort in Copenhagen, notably the great Danish Milk-supply Company, which most unfortunately I was not able to visit, where I believe that pasteurisation is practised. Mr. Busck informed me that these institutions distribute milk at somewhat lower prices than does the Copenhagen Milk-supply Company.

I have now spoken of the ordinary milk. It remains to add that what is known as the infant milk is similarly treated, only more care is taken with it in every way, and all the cows from which it comes have undergone the test for tuberculosis.

Let us pass on to the cream, for I will take the various departments as I visited them. At a large, tin-lined table twelve white-robed women (all the employées were clothed in white) worked at bottling cream which had been separated on the morning of that day, say from twelve to fifteen hours previously. This cream was fed from a tank in another room to a machine with six discharging pipes. Out of these pipes it poured into bottles that were handed to a woman who equalised the quantity in each of them in a way that was marvellous to behold. Then they were corked by another woman with the aid of a machine, and passed to a long table, where yet other women tied the corks and threaded on to every one of them a leaden seal. This seal is the guarantee of the place of origin and quality.

There are three grades of cream, known respectively as No. 1, No. 2, and "whipping" cream. Each of these grades is dealt with at a separate time in order that they may not get mixed. When

duly corked and sealed, the filled bottles, which are sterilised every day, are removed in specially constructed boxes. These cream bottles contain half a pint, but those for infant milk hold a quart.

In another room milk was being separated by steam-driven Alfa separators, the cream flowing over cylinders filled with ice and leaving them at a temperature of 35° Fahrenheit. The "half" skim milk, containing three-fourths per cent. of butter-fat, is similarly cooled by running it over a larger cylinder. This is sold at half the price of the whole milk.

In another department the infant milk was being bottled. This is all milked on to ice at the farms. I saw a specimen of the pails used, which were, I believe, invented by Mr. Busck. In the bottom of these is a cavity designed to contain a ball of ice mixed with salt, on to which the milk falls as it comes from the cow. These pails are supplied to the various contract farms.

What I can best describe as wire cruet-stands, such as we use for oil, vinegar, and Worcester sauce, are sent out by the company, each stand holding from six to ten bottles. Through the help of another society these stands of bottles are sold to the poor for 15 øre, or about twopence. Each of them holds sufficient milk to feed a child for twenty-four hours. The younger the child the more bottles there are in the cruet-stand, as it must be fed more frequently. All that need be done by the nurse or mother is to set a bottle from the cruet into tepid water, and when it is sufficiently warm, to fix on an india-rubber teat and give it to the infant. Special boxes are provided in which these cruets can be sent, sealed and packed in ice, all over Denmark, and if thus treated they

will keep for more than forty-eight hours without the help of sterilisation or preservatives.

Of bottles alone, I may add, in order to give some idea of the activities of this society, about 16,000 have to be dealt with between 10 P.M. and 1.30 A.M. on every night of the year.

As for the scene in the great dépôt, it must be imagined for it cannot be described. Everywhere white-robed people are moving and something is being done, whilst the noise of machinery, of clinking bottles and clattering cans, is enough to overpower the unaccustomed ear. Never did I find myself in a place where it was more difficult to acquire information and take notes.

After the infant milk I inspected the dairy, where all cream left over is converted into butter, of which about 600 lbs. are made every day. First this cream is run into vats where it ripens. When ready it goes to the steam churns that are worked each morning. These wooden churns, although six years old, looked as good as when they were made, a result that is brought about by daily washings with hot water impregnated with soda and lime which remove every trace of acidity from the wood. After leaving the churns the butter is worked and rolled in large rotary machines. It is never touched by the hand. This butter is sold in tasteful porcelain jars containing 1 lb. Danish, of which the price at the time of my visit was 1 krone 20 öre (about 1s. 4d.).

The milk-cans and the bottles are also washed with the utmost care. After rinsing, they are set upon a wheel which dips them into a vat of lime-water so strong that it cannot be stirred with the hand. As the wheel revolves, the cans or bottles

empty themselves of the lime-water automatically and are then removed and steamed. By this method they are entirely disinfected and cleansed from all acidity.

A comparatively new industry here is the sale of buttermilk. Five or six years ago only one dozen bottles a day of this were disposed of, whereas in the autumn of 1910, 3000 quart and pint bottles were distributed every day at a price of 12 öre (1½d.) a quart. I should add that the unsold milk is converted into cheese.

All being prepared, the milk is distributed in the following fashion. Two hundred cans, each containing 100 lbs. Danish, are sent to hospitals. Some goes to three shops the company possesses, while the rest is hawked by means of forty-four vans which deliver it from door to door.

These vans, which I saw, are extraordinarily well-contrived and adapted to their purpose. The cans of whole and skim milk are placed on either side of the front portion of the vehicle, and locked up in such a position that the milk can be drawn through taps which are specially protected from dust. It cannot be otherwise got at even by those in charge of the van. Over the taps are written the quality and the price of the milk. In the rear compartment of the van are trays which exactly fit the cases that hold the bottles of cream and of children's and buttermilk, the prices of which are inscribed over the door. These trays in summer are covered with a layer of ice.

The driver of each van, who is responsible for everything connected with the sale or return of the milk entrusted to him, is accompanied on his rounds

by several boys, who carry the milk into the houses of customers. These coachmen and the lads (who must be over twelve years of age) are dressed in a special uniform. Great care is taken of the latter, who are taught to work hard and to be civil. Also there are precautions to prevent them from squandering their money.

The prices of the various sorts of cream and milk are approximately as follows:—

		Per Litre. <sup>1</sup>	
		s.	d.
Cream for whipping	. . . . .	1	2½
Cream No. 1	. . . . .	0	11
Cream No. 2	. . . . .	0	8½
Whole milk	. . . . .	0	2
Half-skimmed milk	. . . . .	0	1
Children's milk (bottled)	. . . . .	0	2½
Infants' milk (bottled) (specially adapted), according to the water and sugar added	. . . . .	4½d.	to 6d.
Buttermilk	. . . . .	0	1½

<sup>1</sup> (1 litre = 1¾ pints.)

To draw their vans the company keeps a stud of eighty horses, which I saw standing or lying on moss litter in beautiful stables. Not far from these stables are the ice-houses, where is stored the specially collected ice, 3000 tons of which are used every year.

More might be written about this company, but perhaps enough has been said to convey some idea of its remarkable character and the perfection of its management. It was the first society for the distribution of pure milk in the world, and I believe that even now, although some others exist in different countries, it remains the most important. If there is anything on the same scale and organised in quite the

same way, even in the vast city of London, the fame of it has not reached me. I suggest that here there is an opportunity for enterprising and philanthropic vendors of milk in all the great towns of our country. Only, could milk and cream thus collected and treated be sold at a somewhat similar price in England? The charges made to the householder in London and other English cities do not seem to suggest that this would be the case.

Thus, by way of comparison with the prices charged by the Copenhagen Milk-supply Company, I will quote those of a large and excellent London dairy, which supplies first-class milk, as set out in their list in November 1910. In studying these figures it must be remembered that they are for quarts, of which four go to the imperial gallon, whereas it takes a shade over  $4\frac{1}{2}$  litres (4.54345797, to be precise) to make an imperial gallon—not a very large difference, but still something. Therefore the English dairy gives half a pint more in every four quarts than does the Danish company.

*Prices of the London Dairy*

	Per Quart.	
	s.	d.
Pure new milk . . . . .	0	4
Nursery milk from specially fed cows . . . . .	0	5
Best thick cream . . . . .	4	0

It will be seen, therefore, that the London price for new milk is a little under double the price for the same article in Copenhagen, whereas the difference in the cost of cream is enormous. The Copenhagen company charges 1s. 2½d. per litre for its *best* cream, or, let us say, 1s. 6d. (an outside figure) per quart, as against 4s. charged by the London dairy.



Of course it may be answered that this milk-supply company is not a purely business institution, and it is true that Mr. Busck informed me that if it were run solely on commercial lines it could easily be made to return 15 per cent. Still, on the philanthropic basis it pays 5 per cent. and accumulates capital, to say nothing of the value of such milk as it distributes gratis. Moreover, I understand that there are other milk-supply companies in Copenhagen, where many precautions are reported to be taken, which sell their milk rather *cheaper* than that which I have been describing. Surely this is a matter that the corporations of cities might consider in the interests of the health of the population, and especially of young children. If a corporation may supply water or electricity, why should it not supply milk?

But the matter of municipal trading is one on which I do not wish to enter. Therefore, I leave this somewhat thorny question with the remark that those who are alive five-and-twenty years hence will probably see in every large town an institution labelled "The Corporation Pure Milk Supply Depot."<sup>1</sup>

<sup>1</sup> I am told that the progressive Town Councils of Dundee and Glasgow do supply pure milk for children. I have no information as to the scale on which this is done and what success has attended their efforts. Nor do I know whether their example has been followed elsewhere.—H. R. H.

## THE EGG EXPORT ASSOCIATION

ANOTHER very interesting society which I visited in Copenhagen is the Danish Farmers' Co-operative Egg Export Association.

Eggs in Denmark, I may observe, receive an individual attention which is lacking to them in this country. Thus I noted with interest that the first I chanced to eat for breakfast in Copenhagen bore the distinguishing number of 72,334. To what this enumeration referred I cannot say, but I may add that it was a good egg.

This Egg Export Association numbers 45,000 members, belonging to 550 local societies which supply the eggs. Every egg is stamped with the society's and the member's number, so that if necessary it can be traced back to the fowl that laid it. If by chance an individual member of one of these societies should supply a bad egg, he is hunted down and fined 5 kroner (5s. 6½d.) whether the fault be his or that of the fowl. For in this matter, under a kind of employers' liability arrangement, a man is held to be responsible for the misbehaviour of his hen. Ten million score of eggs pass through the hands of this society in the course of a year. This sounds a great number—one scarcely to be realised by the human mind. It bewilders, as do the distances that, according to astronomers, lie between the earth and the remoter suns. However, it may be taken for granted, unless I made a mistake of an "o" in my notes.

When these countless hosts of eggs arrive at the dépôt in Copenhagen they are graded by skilled women (Denmark is full of skilled women!), who pick them out like lightning by the aid of their expert eyes. Of the best, 120 weigh about 18 lbs., and 120 of the worst weigh about 14 lbs. A certain number of these arrive broken, for even in Denmark such accidents will happen. That nothing may be wasted, these are set aside and sold locally. They are used for cooking and omelettes.

The intact eggs are then "candled," that is, arranged in trays or racks over powerful electric lamps, from whose searching light nothing can be hid. If they are bad they betray one kind of opacity. If they have been sat on, weird embryos appear. To the egg that lamp is a kind of Judgment Day. For the good egg it has no terrors; it declares itself at once by a halo-like luminosity which it is impossible to describe. The bad egg, however, becomes an object of more interest to its neglectful despatcher, who must pay the fine of 5 kroner. Such a person, I was informed, very rarely produces a second bad egg.

The good eggs that have passed the test of the shining lamps are conveyed away, and after each of them has received the approbation of the society in the shape of its trade-mark, a stamp of an ornamental character bearing in its centre the letters D.A.A.E., are packed by more skilled women amongst wood shavings in boxes containing either 960 or 1440 eggs, that is eight or twelve long hundreds. This stamp of the Egg Export Society is very indelible, as I know from experience. Having by accident pressed it on my hand, notwithstanding repeated washings,

for over two days I went about guaranteed as a good egg.

In the basement of the building are cement vats filled with the strongest lime-water and, I think, some other secret ingredients. Each of these vats contains from 5000 to 7000 scores of "pickled" or preserved eggs. These are placed in the lime-water about March and sometimes kept there for ten months, when they are taken out, "candled" and sold. In the year 1910, 10,000 cases, each of which contained 1440 eggs, were thus laid down. At the time of my visit these "pickled" eggs were fetching from 8s. to 9s. per long hundred, delivered free on board ship. Like the fresh eggs, for the most part they go to England.

It occurred to me that the enormous weight of all these thousands of eggs would cause them to crush in the tanks, but it appears that the lime-water gives them sufficient support to prevent this catastrophe. So at least I understood.

This Copenhagen egg establishment is but one of ten such packing-stations that are scattered over Denmark. The manager informed me that the business began in 1895 and was growing every year. It started with little or no capital; indeed farmers had to wait four weeks to be paid for their eggs. Now it has a reserve-fund of £15,000, which is used as working capital. The central society settles the price of the eggs, which is fixed at a figure sufficient to clear a profit. In 1909 this profit amounted to £10,000, of which half was paid to the local societies for distribution among their members, while the other half has been placed to the reserve-fund. This reserve fund, however, is not allowed

to accumulate for more than six years, after which it is distributed, six years' reserve being always kept in hand. Speaking generally, the business is run on sound lines and is very prosperous.

I may add that I did not observe that the Danish farmers pay any particular attention to their poultry. At least those fowls that I saw were for the most part of the ordinary farmyard breed and rather small. Still, hens should be judged by the eggs they produce, and these appear to be numerous.

## THE LYNGBY AGRICULTURAL COLLEGE AND OPEN-AIR MUSEUM

At Lyngby, about seven miles from Copenhagen, I visited the Landboskolen, or Agricultural College, which was kindly shown to me by the Director, Mr. Hansen. This school was founded in 1867, and receives a State subsidy of 3000 kroner (£166) per annum. There are two sessions—one of six months, from the 1st November to the 1st May, and one of nine months, from 1st November to the 1st August. From 60 to 70 pupils attend the six months' course, and from 40 to 50 the nine months' course. These pupils, none of whom are women, pay about 40 kroner (£2, 4s. 4d.) a month for their food, lodging, and instruction; but, as in other institutions of the sort, the State gives help to deserving students who cannot afford this sum, by contributing from 100 to 150 kroner (£5, 10s. 10d. to £8, 6s. 3d.) per annum towards their expenses.

The course consists of instruction in agricultural theory, Danish, and arithmetic, and there are no examinations.

Here at Lyngby is an agricultural experiment station of about 30 acres of land divided into plots, which it is believed will be increased to about 130 acres in the spring of 1911. This station is a Government affair, and has nothing to do with the little home-farm of 15 acres belonging to the school, whence it obtains milk and other produce. The plots are used

for the making of highly scientific and accurate experiments in the comparative values of different varieties of grain, clover, roots, &c., and I understand that the results obtained have proved most valuable to Danish agriculture.

Near by also is the famous Dansk Folkemuseum, or Open-air Museum, an institution unlike any that I have seen in other lands. In its grounds are set up ancient farmhouses that have been removed to this place from different parts of Denmark. One of these, built largely of huge oak beams, is extraordinarily primitive and interesting. Originally it consisted of a single large room with places for the cows on each side and a living space at its end. Here were four beds in recesses and a hearth without a chimney. Later, as refinement increased, two other rooms had been built on behind, so that the owners of the place were no longer forced to eat and sleep with the farm stock.

Some of the other houses were equally primitive, and reminded me much of the sod-roofed dwellings that I have seen in the remoter parts of Iceland.

Besides these farm premises of past days there are galleries filled with curious old furniture, carriages, hearses that belonged to guilds, adorned with melancholy plumes and trappings, and other mementoes of the past. Also there is an agricultural museum with a splendid collection of ancient ploughs, waggons, and other farm implements. The walls of this building are hung with cartoons portraying old rural customs. Among these, those of the harvest-home of long ago and of the symbolical pouring of rye over a new-born boy laid in a corn-basket, while the mother watches the ceremony from her bed, are especially worthy of

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notice, as is one of churning by means of a dog which performs an endless journey inside a wheel and thus rotates the churn.

Another very interesting series is that showing the process of reclamation of waste sands by means of afforestation.

I think that this idea of open-air museums is one which might with advantage be adopted in our own country.



## THE KOLLE-KOLLE FARM

FROM Lyngby I drove to Mr. Grut Hansen's famous farm of Kolle - Kolle. Mr. Hansen informed me that in all he farmed 270 tondeland, say 360 acres, of light soil, a good deal of which was under grass. This area of land supports 70 red Danish cows, and about the same number of young cattle, besides growing the usual crops which are managed on a seven years' rotation.

Mr. Hansen bred up his herd between the years 1892 and 1905, but his present cows are chiefly the progeny of the noted bull "Dan," which at the time of my visit was ten years old.

The use of this bull has raised the average of butter-fat in the herd by no less than three-quarters per cent. Some of the cows give an enormous return of milk. Thus one of them yielded no less than 12,911 lbs. in 1908. Here is the record of this cow between 1905 and 1909 :—

	Lbs. Danish.	Percentage of Butter-fat.	Lbs. Butter.
1905-6 (1st Oct. to 30th Sept.) . .	8,048	3.72	334
1906-7 . . . .	10,596	3.89	460
1907-8 . . . .	12,911	3.62	521
1908-9 . . . .	11,493	3.67	470
1909-10 . . . .	9,204	3.77	387

Mr. Hansen's milk average for 1909 was 8016 lbs. Danish, although some of his cows produced a great

deal more, in fact up to over 13,000 lbs. He informed me, indeed, that he had bought a cow which last year yielded no less than 13,230 lbs. Danish of milk of a richness in butter-fat of 4.81, which amount of milk if used for that purpose would have made 717 lbs. Danish of butter. He said that cows of the red Danish breed sometimes give as much as 15,000 lbs. Danish in a year, but of course these are exceptional animals.

Mr. Hansen runs his cows out until the 1st October; but as I visited his farm rather late in the afternoon, I was fortunate enough to find them in their stalls and to have an opportunity of examining them. They were housed in a byre 90 feet long by 57 feet in width, according to my pacing—a much better ventilated building than generally falls to the lot of cattle in Denmark. Five milkers, three women and two men, milk them three times a day, thirteen cows being allotted to each milker.

Mr. Hansen stated that this triple milking results in a gain of from 600 to 800 lbs. Danish per cow annually over what they would yield if only milked twice. All the milk from this herd goes to the Copenhagen Milk-supply Association, which I have already described. Immediately after milking the milk is cooled in the usual way, and then the cans are stood in a round vat which is filled with ice and water until the time comes to cart them to the station.

The two bulls were very fine animals, one of them being "Dan," of which I have spoken above. I asked Mr. Hansen how he managed to keep a bull to the age of ten years, since our general experience in England is that they become useless or unreliable at a much earlier age. He replied, "By giving them

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exercise." Thus one of these animals, I forget which, is forced to draw a vehicle or to pump water. Doubtless this is a wise system, since it cannot be natural for a bull to be kept shut up in a dark place from year's end to year's end. Only I have a firm conviction that my bulls would absolutely refuse either to drag carts or to turn a water-wheel. To induce these savage beasts to do such things some personal influence must be brought to bear upon them of which we lack the secret here. So great indeed is the mutual confidence between bulls and their keepers in Denmark that I believe the stockmen sometimes ride on them.

In this same building were also several young bulls which had just passed the tuberculin test. These animals, the progeny of "Dan," sell at prices ranging from 800 to 1500 kroner (£44, 6s. 8d. to £86), while the heifers in calf can be bought for about 350 kroner (say £19, 10s.). The practice in such herds is to keep only the best of the male calves that are bred from heavy milking dams. The rest are sold within fourteen days of birth, which I suppose accounts for the quantity of veal which is served at Danish tables, especially in the hotels.

It is strange to me that these red Danish cattle, which possess such splendid milking qualities and produce such a high percentage of butter-fat, are not introduced into England, where I never saw or heard of any of them. Of course the answer is that they cannot compare with shorthorns as beef animals. Professor Maar, of the Agricultural College in Copenhagen, of whom I shall speak later, informed me, however, that although old cows of this breed are rarely fatted, if fed up they will attain to a weight

of from 1000 to 1200 lbs. Danish. He added that a three-year-old red Danish bullock in ordinary condition scales 1500 lbs. Danish or over, and a bull up to 2000 lbs. Danish, which seem fairly satisfactory weights.

If the difficulty as regards the importation of live cattle could be surmounted by grace of our Board of Agriculture, it certainly appears to me that it would be well worth the while of some English milk-farmer to make a trial of these cattle, which on our pastures and in our climate ought to do even better here than in their native country. Until a strong and practically unrelated stock was established, however, such an experiment would involve the occasional importation of fresh bulls.

The ration supplied to Mr. Hansen's cows includes earthenut and soya cake with a proportion of crushed oats. The cake is fed to them in a peculiar and ingenious measure with a movable screw bottom, which can be set in such a fashion that each animal receives its own exact allowance. As I think I have said, in Denmark the control-lady prescribes periodically how much cake is to be given to each cow. The good cow is rewarded and encouraged with extra cake, but the bad cow that will not milk as it should finds itself cut down.

Mr. Hansen keeps twelve horses on his farm, very nice animals of Danish breed or Danish crossed with Percheron, all of them lacking the hair upon the legs which distinguishes our Shires, and of course comparatively light in frame. If I may be allowed to say so, Mr. Hansen is an example of the best stamp of Danish farmer, a man full of enterprise and intelligence, who well deserves the success that he is reported to have attained.

## PROFESSOR MAAR'S FARM AT NORDSKOV

EVERY visitor to Denmark is expected to make an expedition to Elsinore, or more properly Helsingör, and its castle of Kronborg, sacred to the memory of Hamlet, who, if he ever existed at all, lived somewhere else about a thousand years before it was built. Still Helsingör remains proud of the connection, as is shown by the fact that the "Hamlet bicycle" is largely advertised upon its walls. Also his grave is shown in the neighbourhood, and a brook a few inches deep in which Ophelia is said to have drowned herself. Lastly, the sixteenth-century castle of Kronborg is worthy of mention if only because it contains some of the very worst pictures that were ever painted.

Of more interest to me were the farms in this neighbourhood which I visited under the kind guidance of Professor Maar. The country between Copenhagen and Helsingör is pretty and well wooded, but some of the land struck me as badly farmed and foul with weeds. Beech is the prevailing tree; I saw no elms or oaks. Many charming houses are visible on either side of the railway line, but none of them seemed to be very large. They indicated general prosperity rather than wealth and grandeur.

Changing at Helsingör into a little country train, I went on to Nordskov, a place between 50 and 60

English miles from Copenhagen. Here Professor Maar farms a small estate of about 80 acres, as I understood to ascertain with what success it is possible to work a holding of this size, which is called a *bondegaard*, managing it as a small Danish farmer would do.

The farm, when bought about fifteen years before the date of my visit, cost him 80,000 kroner (say £4433), of which sum about £650 went to pay for the stock, the actual price of the land and buildings being, as I gathered, 1140 kroner per tøndeland, or about £47, 7s. 6d. the acre. Professor Maar estimated the average value of land in the neighbourhood at from 700 to 800 kroner per tøndeland, or roughly from £29 to £35 per acre. Doubtless his property cost him more on account of its special residential and other advantages.

He was unable to tell me to what exact extent it was profitable as a farming investment, for the reason that he had sold some plots on the cliff as building sites for villas, which complicated the accounts. Also he pointed out that as he lived in Copenhagen except during the summer months, and therefore could not personally superintend the agricultural operations, his labour bill was somewhat higher than it should be.

His staff consisted of a working bailiff, one regular man, an extra man in summer, with additional labour in harvest and for root cleaning, and a cowman. The bailiff was paid  $2\frac{1}{2}$  kroner a day (2s. 9d.) in summer and 2 kroner (2s. 3d.) in winter, being allowed in addition a free house and garden, milk, and 4 cwt. of barley. The ordinary hand received the same money but no extras, as did any casual men who might be employed, with the addition of half a kroner (say

sevenpence) when thrashing. The cowman who milked and tended the cows received 1 öre per lb. of milk. As the Professor had twenty-five cows, of which he informed me the average yield was 7000 lbs. Danish per annum, this, according to my calculations—which may, and I think must, be wrong—means that the cowman receives £91, 2s. 11d. per annum. Although Professor Maar stated that this man's salary was high because he must have a responsible person to look after the cows in his absence, it is obvious that some mistake has crept in here, as he would scarcely pay his cowman nearly twice the wages of the bailiff. Either the total milk produced is less than I have calculated, or, which is more probable, there was an error in the verbal translation of the figures.

If, for instance, the cowman received 1 öre per kilo of milk instead of 1 öre per lb., as my note says, his wage would amount to about £46 per annum. Or possibly some of the twenty-five animals reckoned as cows were heifers not yet in milk, which of course would alter the basis of my calculation. There I must leave the matter, since it is impossible to clear it up without special reference to Denmark. For the rest these wages compare well with those paid in England; but again I must remark that the Professor was careful to point out that they were higher than the average.

Nordskov is a charming spot. The land slopes gradually to the beech-wood on the brow of a cliff 130 feet high that borders the Ore Sund, which we know as the Sound. Hence the view of sea and of the coast of Sweden opposite is very beautiful. That from the same spot looking inland is almost equally so, for here the eye travels over a vast and fertile plain, backed to the left by a dense mass of woods.

On this farm also stands a picturesque windmill, which with its accompanying buildings is let for 1000 kroner (£55, 8s. 4d.) per annum, a rent that, as I was informed, leaves the tenant a good profit. The farmhouse, too, which Professor Maar uses as a summer residence, is quaint and old-fashioned. The land is what is known as medium in Denmark, although we should call it light. It grows good crops, especially of beet and clover, though some of the former had to be ploughed over in the summer of 1910 owing to the drought. There is no permanent pasture on the farm. The seven years' rotation is as follows: (1) oats and vetches for cows; (2) rye; (3) barley; (4) mangolds; (5) oats; (6 and 7) clover and hay.

The practice here is to sell the corn and buy cake for the cattle with the money it realises, except for a balance of about 1000 kroner (£55, 8s. 4d.) which is kept in hand. The milk from the twenty-five cows is sold to a "milk-pedlar" at 5 öre, that is rather less than three-farthings, per lb. Danish. The cows, guarded by a herd, a very nice lot of animals of the red Danish breed, were feeding on a two-year clover lay which had been mowed for hay. The local custom is to tether them until the beginning of July, but when I saw them towards the end of September they wandered loose because of the scantiness of the feed and to prevent them from catching cold. On this farm a certain amount of seaweed collected from the beach is used for manure with good results.



## A PEASANT'S FARM AT HELSINGÖR

WHILE driving in the neighbourhood of Helsingör I stopped at hazard at a little farmhouse and asked if I might see over the place. At the time I was searching for a peasant's farm held in freehold that was not a State small-holding, and as it chanced, here at Söborghus, I found exactly what I wanted. The owner, Mr. Jens Schmidt, an active, middle-aged man, received me most courteously and answered every question I put to him in the kindest manner.

He said that he had bought his holding of fourteen tøndeland about fourteen years before. The total capital invested seemed to be 16,000 kroner (£885), or at any rate that was the amount borrowed, on which he paid interest at 4 per cent. This sum was advanced on three mortgages, or on two mortgages and as a floating personal debt. The first mortgage was for 6500 kroner (£360), the second for 2000 kroner (£110, 16s. 8d.), and the balance of 7500 kroner (£415) was lent to him by his mother. He worked the farm with the aid of his wife, his daughter, a pretty girl of eighteen, and a hired boy, to whom he paid 100 kroner (£5, 10s. 10d.) a year with food and lodging. When I was there they were all of them engaged in lifting potatoes.

He told me that he worked very hard himself. "I can't sit still," he said, adding that he was quite happy and looked forward with every confidence to the future, which is more than most people would do

in this country if they owed nearly £900 charged on a farm of nineteen acres and its stock!

This stock consisted of five red Danish milking cows and a calf, two five-year-old horses which cost 350 kroner (£19, 8s.) each and were strong and useful animals of their sort, two pigs, and some poultry. In winter, however, Mr. Schmidt keeps about ten pigs, which he buys young and sells fat to a co-operative factory. His cows produce about 100 lbs. Danish of milk a day, which also goes to a co-operative dairy. His practice is to milk them only twice a day, not three times, as so many do in Denmark.

The land, which is of good quality, was excellently farmed. Thus I noticed a piece of old clover lay being "skimmed" in order to clean it before deep ploughing next spring for potatoes. Also a large patch had just been planted with strawberries, for which there is a market in Helsingör at 20 öre (2½d.) per lb. The cows that were tethered on some clover-land were useful animals, and when in the shed received among other things a ration of brewer's grains.

The house was really a charming dwelling of its sort. It contained two sitting-rooms excellently furnished. The kitchen was a model of what such a place should be, spotlessly clean, with dishes and other utensils arranged upon the walls in racks. In one of the parlours stood a beautiful chiffonier which Mr. Schmidt had inherited from his grandfather and, as he told me with pride, had caused to be repaired at a cost of 100 kroner, or about £5. Also there were an antique tall clock and some good brass urns and china.

Mr. Schmidt informed me that his cash expenses for the food of his household amounted to 20 kroner

Mr. Schmidt was well set up in agricultural implements, which included a new American plough called the "Oliver," rather short in make, that cost him 52 kroner (£2, 17s. 6d.), a hay-rake, and two waggons, one for carting and one for general use. What struck me most about him was his abounding cheerfulness and belief in himself and in the capacities of his little farm. In the words of the old saying, he seemed to be as happy as a king, and I parted from him with real regret.

I also visited in this neighbourhood another very prettily situated farm of 110 tøndeland, called Kronborg Ladegaard; but as I could not find the proprietor, and his subordinates did not seem to be very willing to give information, which is for the most part so kindly and readily afforded in Denmark, I omit all account of this place.

(£1, 2s.) a week. I quote this to show what a man in his position with a family of three, including a servant, spends in Denmark. Of course it is more than an English agricultural labourer can afford, perhaps double as much, but it must be remembered that his position is widely different from that of a Danish small-holder. Still I confess that I do not understand how a man like Mr. Schmidt can pay interest on a debt of £885 and still earn enough out of 19 acres of land to enable him to spend 22s. a week upon his household expenses, to say nothing of those of clothing. Moreover, in this instance 450 kroner (about £25) had been expended not long before in the erection of a Dutch barn, and he hoped to build a large manure tank during the following year. Possibly he had other resources that brought him income, only then one might think that he would have used them to reduce his mortgage debt.

On this point, however, I must again emphasise the fact that owing to the advantageous conditions on which money can be borrowed upon land in Denmark under the credit-union system that I have explained, even rich folk seem to take up loans upon their real property in order to provide themselves with working capital. If this is so in their case, doubtless those who are less well off follow the example. Also, however it may be done, it remains true that all classes of farmers in Denmark seem to carry more stock on and to get more out of the land than we do here. Personally I presume that this circumstance is to be explained by the universal custom of co-operation, since there is nothing in the soil itself, at any rate in most parts of the country, to account for the remarkable success of those by whom it is tilled.

## SMALL-HOLDINGS AT HILLERÖD

ON another day I visited the little town of Hilleröd, which is better known as Frederiksborg, from the castle of that name. The interior of this castle was burnt out in 1859, and very well restored by public subscription at a cost of about £40,000. It is an extremely interesting building with many spires, situated on an island, or rather on three islands, in the midst of a lake. The interior also is fine, though some of the great chambers are rather too gorgeous for my taste, and in the galleries are many interesting pictures and some good specimens of old furniture. The gardens that lie behind the castle are very beautiful in their way with their avenues of ancient limes and clipped yews.

At Hilleröd I had the advantage of talking over the State small-holdings question with Mr. Holger Bernild, the editor of a local paper who was kindly conducting me to see some farms in the neighbourhood. Mr. Bernild, I should state, to me seemed to be what we should call an advanced Radical in politics, and his opinions are therefore of interest as representing that point of view.

He said that he thought the State small-holdings scheme a good one, although it was not well carried out. The applications were so many that the price of property was forced up, with the result that often the purchaser had to content himself with inferior property which was all that he could afford to buy under the provisions of the Act. Thus in that district the State

owned some large estates which it had split up into small-holdings. This had proved satisfactory enough to the State, which had sold its land well, but not to the small-holders, as owing to the good quality of the soil and the competition resulting from the number of the applicants, they had been obliged to buy too dear. Personally (like Mr. Waage), he would prefer to see a leasehold system in force, although (unlike Mr. Waage) he would limit that leasehold to the term of the life of the leaseholder and his wife. He said that under the leasehold system all the capital of the small-holder would be available to furnish his farm with stock and implements.

I confess that I could not follow his argument on this point, since, as I have already shown, the rent which the leaseholder must pay would differ very little from the annual amount demanded from the freeholder in order to discharge his obligations to the State in a period of a little under a hundred years. The only extra sum that would remain available as working capital would be the tenth of the purchase price, which the law requires that he should possess. This, however, amounts to something, and is so far an argument in Mr. Bernild's favour. I should add that he admitted that the ordinary Danish peasant would not be as well satisfied with a leasehold as he was with a freehold, notwithstanding any disadvantages that the latter might possess.

Leaving Hilleröd, I drove over a swamp that is in process of being reclaimed. Dotted about its borders were labourers' cottages. Near the road grew some old beeches, and also a young oak wood where, from the regularity of the saplings, I judged that the acorns must have been drilled. Further on were the holdings

of many State "housemen," whose dwellings were neat in appearance, the roofs being tiled, thatched, or slated, according to the taste of the owner. I observed that all of these houses were surrounded by good gardens. The land is light, and the holdings varied from 6 to 12 tøndeland in extent.

After driving a certain distance I visited a peasant's farm owned by Mr. Sylvest Hansen, which consisted of 18 tøndeland, or about 24 acres, of good soil. Mr. Hansen, who is not a State small-holder, bought it from the Government at the price of 450 kroner (£25) per tøndeland, without buildings or stock. The house and steading he erected himself at a cost of 7000 kroner (£388).

To my astonishment Mr. Hansen addressed me in English. On inquiry I found that his knowledge of that tongue was accounted for by the fact that he had spent three years in England, one of them as a labourer upon an estate in Essex, and two on a stud farm in Yorkshire. He informed me that he went abroad, not to make money, but to see England and to find out how we farmed there. I regret to have to add that he considered that "the land is better treated in Denmark than in England, where so much is left in grass." He thought, however, that farming paid more in England, as there produce fetched a higher price. In his opinion the State small-holders of the neighbourhood were not flourishing. In order to live they must work for others, as their holdings did not produce enough to keep them. He considered that 10 tøndeland was the minimum area on which a man could exist on soil of the local character.

Personally, however, he stated that he was getting on very well, although the cost of his land had as

usual been left on mortgage. At least he could live and pay the interest out of his farm, although as yet he could save nothing. This he hoped to do in the future. He made the most of his income out of cows, of which he had five, selling his milk to a co-operative dairy at 5 öre per lb. Danish.

In addition to the cows he had a bull, four heifers, two sows, and what are comparatively rare in Denmark, two sheep. His buildings were very good, consisting of a stable, a cow-shed, with a cellar underneath for the storage of roots, a barn filled with rye straw, a cart-house, and a pig-stye. Mr. Hansen sold about 80 bushels of rye and barley annually, and worked his farm with the aid of his wife's father and mother, who lived with him.

On my way back to Hilleröd I stopped at hazard at one of the State small-holdings of the district, which stood near to the road. It belonged to a Mr. Balterwin, who was out working for some one else. His wife, however, and his brother who helped him not being strong enough to undertake regular outside work, showed me the little farm. The house, which was very tidy, consisted of a sitting-room, bedroom, and kitchen. On the wall of the first of these I noticed a diploma presented by the Agricultural Union of the district to Mrs. Balterwin—a very capable woman with no children—"for long and good service," I suppose as a domestic.

This couple had owned their holding of about 5 tøndeland, or  $6\frac{1}{2}$  acres, for three years, and had obtained a State advance of 3000 kroner (£166, 5s.). In addition to this advance there was a second mortgage on the place, for how much I do not know. The house and buildings had cost them 3500 kroner



(£194) to erect, and seemed cheap at the money. The land was good and well farmed, and their stock consisted of two cows, a heifer, four pigs, fowls and ducks, and a horse. This horse they hired out to do carting, which, it was explained to me, "enabled them to live." I gathered that these good people did not find it too easy to make both ends meet and pay the interest on their mortgages. This rather bore out Mr. Hansen's opinion that 10 tøndeland of that soil are necessary to keep a family, especially when all or most of the capital is borrowed.

Not far from this place I saw a herd of 115 cows that belonged to a farm called Hilleröd's-holm Gaard being milked in the open field by Polish or Swedish girls. It was a pretty sight.

Hilleröd, to judge by the amount of building in progress, must be a prosperous little town. In the waiting-room of the station here were hung some very good engravings. On inquiry I was informed that these and similar pictures are provided in such places by Government to encourage a sound taste in art among the people.

## THE TRIFOLIUM DAIRY

ON my way to the island of Falster in the south of Denmark, whither I went to visit the Kammerherre Tesdorpf and to study the growth of sugar-beet and its manufacture into sugar, I stopped at Haslev to see the famous Trifolium Dairy. This dairy, around which the town has sprung up, has three branch establishments at Faxe, Dalmose, and Maribo, but I understand that the Haslev dépôt is by far the most important.

In truth it is a wonderful place. Built, I believe, at a cost of £40,000 some ten years ago, in another ten years the accumulated sinking-fund will have paid off the total capital expenditure. Meanwhile the balance of profit earned after allowing for this sinking-fund is distributed half-yearly among the co-operators, who for the most part are large land-owners living within a distance of about twelve miles.

I forget exactly how many cows supply the milk that is dealt with at the Trifolium Dairy, but I think they number about 12,000. This, however, may include those of which the milk goes to the sub-factories, though I am by no means certain on that point. The amount of milk which comes in daily is enormous. Again I cannot remember the exact figures, but I know that quite a hundred women are on an average employed to handle it, to say nothing of many other persons, male and female.

From the drippings of the cans alone 200 lbs. Danish of milk are collected daily, and at the time of my visit in the autumn the weekly output of butter was about 14,000 lbs. Danish, besides other products such as cheese, of which huge quantities are manufactured. In short the business is immense, and, so far as I am aware, unequalled by anything of the same sort in England, which buys its output.

Trifolium is a long, low building with the usual platform on which are delivered the full cans that come in by rail or cart. Director Damant, who kindly showed me over the establishment, took me first to a place where samples of milk are tested thrice a fortnight to ascertain their fat percentage. This is done in glass tubes arranged on electrically rotated machines, but the exact process I cannot explain. Here, too, sacks of chopped mangolds sent by the members are analysed for their sugar values. (I wonder how many English farmers test their root crops in this fashion, and profit by the knowledge so obtained in order to grow them better. Personally, I confess that I have never done anything of the sort.)

The milk on arriving in the dairy, where the noise is terrific, is weighed in a tin vat and runs thence into an apparatus where it is heated by steam to 50° Celsius (or 122° Fahrenheit). Thence it goes to the great separators. After separation the skim is taken away in pipes, most of it to be sent back to the farmers for pigs' food, while the cream is reheated to about 100° Celsius (or 212° Fahrenheit), then cooled immediately and pumped into vats in another room, where it stands twenty-four hours to ripen before being made into butter on the following day. In this room young women clothed in white dresses

and wearing high sabots were engaged in mixing a carefully prepared lactic-acid culture which is used to sour the cream before it is churned.

From this chamber the cream travels into another where it is churned in five huge steam-driven churns, the production of butter being regulated according to the market price. On the further side of this room are two cement troughs filled with cold water, in which the butter lies for half-an-hour to gain texture. After this it is worked on circular steam-operated machines, by which it is washed, salted, and moulded. The surplus cream is exported to Germany and there made into butter.

In an adjoining gallery the worked butter is packed in tubs for export to England. These tubs when filled are of three weights, namely, 100 kilos, 50 kilos, and 25 kilos. It is easy to trace any one of them, in the event of its contents proving unsatisfactory, by means of a numbered label placed upon the butter, to which has been added from 2 to 3½ per cent. of salt in accordance with the requirements of its destined market. The parchment paper used in the packing is specially treated with sulphuric acid and sugar to make it tough and waterproof.

Near by is a butter store that by means of special machinery can be cooled in summer and warmed in winter, and also a place for the thorough cleansing of the tubs.

Further on stands the engine-house, where a 100 horse-power machine which has worked daily for ten years supplies power, and another machine produces cold air. Also electric light is generated, and there is a control-board from which the temperature of all the different departments is regulated.

Passing the boilers and the place where the cans are cleansed by being inverted over steam-pipes, I came to yet another department where the skim milk is delivered into great tanks. Of this skim 90 per cent. is returned to the farmers, who pay for it at the rate of 1 öre (or half a farthing) per lb., the rest being used in the manufacture of cheese. This I saw in progress, the men working the cheese in the vats with their hands. Some of the whey that exudes from it is taken by the farmers, who pay for it at the rate of 25 öre (3d.) per 100 lbs., and use it to feed pigs.

This whey, or a portion of it, is separated to extract the last drops of butter-fat, which are churned into a second-class butter. Sundry sorts of cheeses are made, either from skim milk, or skim mixed with whole milk, one kind called Norwegian cheese being brown in colour. This is done up into 1 lb packets covered with silver paper, and sells for 30 öre (3½d.) per lb. retail.

Another, called Swiss cheese, is a sort of imitation Gruyère—I think Ementhaler is its name—and each of these cheeses weighs 150 lbs. and is worth 100 kroner (£5, 10s. 10d.). Then there are the cheese stores, one of them hot, and another containing 300,000 lbs. weight of old cheese. The contents of these stores in 1909 totalled 1,500,000 lbs. Danish.

Also I visited a repairing-shop and another where the milk-cans are mended. I understood that the wage of the head man in this department is between 4000 and 5000 kroner (£221, 13s. 4d. to £277) per annum, with food, lodging, light, and fuel—a high salary for Denmark. Lastly, there were the labora-

tory where tests of butter, cheese, &c., are carried out every day; the bath-rooms for the staff, and above them the cooper's shop where the casks are manufactured.

Such is a brief account of the most marvellous place of its sort that I have seen in any land. I can only say that its arrangements, organisation, and scientific attention to detail filled me with wonder. To see it alone would have been worth a visit to Denmark, showing as it does what can be done by intelligently directed co-operation.

At Haslev, as in some other towns, I had the advantage of a conversation with the editor of a local paper on the subject of the State small-holdings. This gentleman informed me that there were a number of these holdings in the neighbourhood, and that the good men among them did well, while those who were inferior failed. He said that the latter often had neither sufficient knowledge nor sufficient capital to enable them to succeed, the result being that they were obliged to give up and sell out to some one else. Speaking generally, like most others whom I consulted on the point, he was of opinion that to make the movement really successful and to enable the State small-holders to live and bring up a family, they ought to have more capital and to work a larger area of land.

## THE NYKJÖBING SUGAR FACTORY

CONTINUING my journey southward I came to Vordingborg, and here crossed the Storestrom, the sound between Seeland and the island of Falster, a passage of about twenty minutes on the steam ferry which carries the sleeping cars of the trains to and from Hamburg. At a place called Örehoved I took train again for Nykjöbing, a prosperous little seaport on the island of Falster.

The land in Falster is very good, indeed some of the best in Denmark, and looked to me as though it had once been fen. Here for the first time I saw the sugar-beet growing in fields and in process of being lifted by women who dug it up with forks. Also I saw a man ploughing it out with two horses harnessed to a curious implement which I will describe later. Everywhere the beet looked very well, being regular in the plant, green in the crown, and clean. There is a good deal of woodland on Falster, and some of the fields here are divided from each other by wattled hurdles, alongside of which are planted rows of poplars.

At Nykjöbing I was met by Kammerherre Tesdorpf and Mr. Möller, Director of the Nykjöbing Andels Sukkerfabrik, or sugar factory. There are several such factories in Denmark which pay, I understand, from 17 to 20 per cent., but I believe I am right in stating that this at Nykjöbing is the only one which stands out from some sort of combine

or trust that exists among the rest. This combine or trust, however, as I was informed, buys the sugar from the Nykjöbing factory.

The original capital of the Nykjöbing factory, founded, I was told, in 1884 by Mr. Tesdorpf's father, consisted of 3500 shares of 300 kroner (£16, 12s. 6d.) each, which shares are now worth 900 kroner (£49, 17s. 6d.) on the market. The present capital is 3,000,000 kroner (or say £166,250). Exactly what interest it pays I do not know, as I did not like to inquire; but when I asked Mr. Tesdorpf, who, I believe, is the chairman of the company and a very large holder of its shares, if it amounted to 20 per cent., he replied cheerfully, "Oh! more than that."

At any rate, so prosperous is the undertaking that in 1911 it is to be enlarged at a cost of 700,000 kroner (about £38,800). At present it can deal with 25,000 cwt. of beet in twenty-four hours. When enlarged it will treat 36,000 cwt. in the same time, or according to a rough and possibly inaccurate calculation which I have made, on the supposition that the factory runs for three months in each year, as it does now, the produce of about 13,500 acres, allowing 12 tons per acre as an average crop.

The visitor to this mill enters a huge hall full of machinery, and instantly becomes aware of a heat so oppressive that he removes as many garments as decency will allow. Also, as in the milk factories, he is deafened by the din. First he is shown sugar-beet, of which heaps and truck-loads stand outside, being fed by a giant wheel into a huge trough where they are washed by machinery. It is a wondrous sight to see them writhing about in the muddy water as though they were alive and then lifted by a colossal



screw apparatus to another level. Hence they fall into buckets, arranged upon an endless chain, that deliver them to the cutters of grooved steel, not unlike combs in appearance, which reduce them to tiny shreds.

Near by these cutters is the refuse chamber into which the said shreds, pressed of their water and having given up their sugar, are delivered after boiling to serve as food for cows. This *schnetzol*, as it is called, is best for the cattle if eaten at from four to five weeks after it leaves the factory, although I understand that it can be stored for a year without real injury. The men who deal with the *schnetzol* in the chamber I have mentioned are paid at the comparatively high rate of 6 kroner (say 6s. 9d.) a day, as the work is very damp and cold.

The shredded beet fall on to an endless steam-driven belt, which, by an ingenious arrangement very difficult to describe, delivers them into whatever boiler is ready for their reception. Alongside of this belt stand men engaged in sharpening the cutting-knives at grinding-stones which are also turned by steam.

The boilers are enormous tanks about 25 feet in height. Here the beet-pulp is mixed with 2 per cent. of lime that clarifies and refines it, which lime, its office done, is subsequently removed again by means of thicknesses of sacking. These serve as strainers or filters, through which the expressed juice is forced, the shredded refuse going in another direction. From the boilers the purified extract is delivered into a cylinder and thence into other cylinders where it boils furiously in a vacuum, thickening as it passes from cylinder to cylinder and

from tank to tank. Ultimately it emerges as crude sugar into a long room where the heat is so tremendous that the men who work there are naked save for a waistcloth. These men are paid from 8 to 9 kroner (say nearly 9s. to 10s.) a day, which certainly is not too much considering the trying nature of their task. I believe that baths are provided in which they can cool themselves from time to time, and strange to say, as I was informed, they do not often suffer in their health.

Below this place is a hall where are vessels of treacle that is extracted from the sugar, which treacle is sold to make brandy and cattle food; and on the other side of it more iron vessels that are filled with brownish sugar, which is ladled out of certain centrifugal machines. In a corner of this place, sheltered by a kind of glass house, sit clerks whose business it is to record the weight of the sugar on behalf of the Government, that charges an excise duty of 4 öre ( $\frac{1}{4}$ d.) per kilo. Thence the sugar is carried to sieves that shake it smooth and fine, and leaving the sieves it is ultimately conveyed to a top floor, where it lies in an enormous pile. It takes a month's produce of the factory to fill this floor. In the Nykjöbing mill the sugar is not refined or converted into loaf. These processes are carried out elsewhere.

In the lower parts of the building are a great boiler-house with many boilers, and a gigantic pump which sucks out the mud that results from the washing of the beet. It used to be a problem here to know what to do with this mud, but Danish ingenuity was equal to its solution. It is delivered into a flume and flows by gravitation to a stretch of useless swamp-land that lies at a distance of about two miles from the factory,

which it is used to warp. As the soil adhering to the beet is very rich, by this means 20 acres of excellent land are created every year, while the factory has the advantage of getting rid of an inconvenient accumulation. It is by attention to details of this sort that agricultural ventures are made to pay so well in Denmark. I visited this swamp and saw the mud flowing on to it.

Escaping at length from the mill, which, interesting as it was, is a most trying place to inspect on account of the terrible heat, that is not made less disagreeable by the sickly smell of the sugar, I was taken to a great reservoir. This holds 80,000 cwt. of beet, which fall from it into a channel of running water that floats them to the mill and at the same time partially washes them. Near to this channel is another that carries the beet which arrive by sea. Here also were trucks being loaded with the beet refuse or *schnetzel*.

I was informed that at this factory salt water is only used to float the beet in, that for the final washing in the factory is fresh ; indeed no salt water enters there. This interested me, as I understood, perhaps wrongly, that in the sugar-beet mill which, I believe, is in course of erection in Essex it is proposed to make use of salt or brack water for most purposes.<sup>1</sup> The coal used in the boilers at Nykjöbing is English.

The mill, as I have said, only runs for three months in the year, during which time it employs four hundred men who, except for certain special duties, are paid at the rate of 5 kroner (5s. 6d.) a day. As these men are

<sup>1</sup> I now hear, to my great disappointment, that after all the scheme for the erection of this Essex sugar-beet mill is said to have come to nothing.—H. R. H., February 1911.

collected from the surrounding country they have to be lodged and boarded. The lodging costs them 25 öre (3d.) per diem, or, including coffee and their food, 1 krone 20 öre (1s. 4d.), for which sum they are also supplied with two bottles of beer. The diet is ample. In the daytime they are given soup, meat, and fifteen enormous sandwiches of ham, sausage, brawn, &c. If on night work they receive seventeen of the same sandwiches with coffee and beer. The accommodation also is very good, comprising large dining and smoking rooms, with sleeping chambers arranged for twelve beds, and bathrooms.

If such sugar mills should be established in England, as is now proposed, I think that one of the difficulties will be to provide an adequate supply of competent labour. I know of few districts whence four hundred, or even two hundred men could be taken for three months without quite upsetting the local agricultural labour market. Also I wonder whether our farm hands would face the heat and arduous work of such a place, except at a rate of wage that might prove prohibitive. Indeed my private opinion is that most of the labour will have to come from elsewhere than the surrounding fields and villages, especially as the agricultural operation of lifting the beet must absorb many extra hands.

This year (1910) I have grown two acres of sugar-beet as an experiment. They have not been very successful, as they were sown late upon the only piece of land that was left available, which is heavy in character, whereas to succeed well these beet seem to require light or mixed soil. Also the season in

East Anglia has been most unfavourable to the development of any sort of root crop, except perhaps white turnips, the rain having been continuous and sunshine nothing but a memory.

The result in my case was that although the plot was amply manured, I do not believe that we secured much more than 6 tons an acre of rather indifferent sugar-beet. Yet when it came to the question of getting them up (a drought had inconveniently set in at the time which made the land almost too hard to plough), the cost was no less than £5, 3s. At this rate 17s. a ton, the amount paid by the Dutch purchasers on board ship, was not a remunerative price. I append a rough account of the expenses so that the reader may judge of the matter for himself.

It must be remembered, however, that under suitable conditions I could, I think, grow at least 12 tons per acre on land which I farm, and that if a mill existed in the neighbourhood that would give full value for the roots and return the refuse to feed cattle, the results might read differently. Only the question of labour for lifting would remain; also that labour would have to be trained to the work, which, as I shall describe later, in Falster is sometimes done by Polish girls. Some of my neighbours who also grew trial fields of sugar-beet, imported from Germany the proper forks for lifting them, but of these forks the Norfolk labourer declined to make use. The result was that many of the beet were broken in the ground, which is to be avoided, as the tail part is the richest in sugar and the goodness escapes through the wound.

Here is the account :—

	£	s.	d.
Ploughing 2 acres at 7s. 6d. per acre (a low figure) . . . . .	0	15	0
Cultivating and harrowing . . . . .	0	10	0
Drilling and rolling . . . . .	0	10	0
Horse and hand hoeing . . . . .	3	5	0
Forty loads of farmyard manure at 2s. . . . .	4	0	0
8 cwt. Fison's mangold manure at 7s. . . . .	2	16	0
2 cwt. of nitrate of soda at 10s. . . . .	1	0	0
Rent and rates . . . . .	2	10	0
Lifting crop . . . . .	5	3	0
Carting to station . . . . .	1	0	0
Carriage to Lowestoft . . . . .	1	6	2
Total . . . . .	£22	15	2
By 12 tons 9 cwt. of sugar-beet at 17s. per ton (the price paid by the importer) . . . . .	10	11	8
Loss on the crop . . . . .	£11	3	6

As I have said, however, this particular crop for the reasons given above was a bad one. Let us suppose, therefore, that in a normal year and on suitable soil it were doubled, and amounted to 24 tons 18 cwt. Even then there would be a considerable loss, seeing that the cost of lifting, carting, and carriage would also presumably be doubled. Even at the price realised by Mr. Tesdorpf, which, as will be seen later, is £1, 3s. 6d. the ton, according to my calculations there would still be a loss.

The inference appears to be that unless we can largely reduce the cost of the cultivation of sugar-beet, and by owning factories co-operatively earn a share of the great profits of those factories, and further have the advantage of the refuse as a cattle food, sugar-beet production is not likely to prove a profitable venture in my part of the world. It must be understood, however, that I advance this conclusion in the

most tentative manner, as after all it is based only on a single experiment. Still, I believe the figures to be accurate, and I may add that for my part until I see a factory established within a few miles of my farm, I shall grow no more sugar-beet. Nor even then, unless I were part-owner of such a factory, would I, as at present advised, contract to grow this crop at less than 30s. a ton.

By way of contrast I will now give the cost, &c., of growing 2 acres of mangold upon another field of my farm in this same bad year of 1910. The weight of roots in this instance is not hypothetical, but that lifted. Or rather it is less, since when these were weighed for the purposes of a local root club competition they were found to come to over 38 tons the acre, instead of 35 tons, the weight allowed for in the following account :—

*Cost of Growing 2 Acres of Mangold on Ape-Field, Ditchingham*

	£	s.	d.
Ploughing . . . . .	1	0	0
Harrowing, drilling, and rolling . . . . .	1	0	0
Horse and hand hoeing . . . . .	2	14	0
Forty loads of farmyard manure at 2s. . . . .	4	0	0
8 cwt. of mangold manure at 7s. . . . .	2	16	0
1 cwt. of nitrate of soda . . . . .	0	10	0
Rent and rates . . . . .	2	10	0
Lifting crop . . . . .	1	4	0
Delivery to station . . . . .	5	0	0
Carriage to Lowestoft at 1s. 10d. per ton . . . . .	6	8	4
Total . . . . .	£27	2	4
By 70 tons mangold at 10s. per ton . . . . .	35	0	0
Profit . . . . .	£7	17	8

It should be added that in this case the mangold were not sold, but as they are of excellent quality, 10s. a ton

seems a moderate value to put upon them. Neither in the case of the sugar-beet nor of the mangolds has the cost of the seed been brought into account, as in the former instance it was supplied gratis by the importers. In the light of the foregoing accounts the agricultural reader will be able to form his own opinion of the relative values of sugar-beet and ordinary mangold cultivation to the East Anglian farmer; that is, as things stand at present.

I must add that since the above was written I have found that the loss on the sugar-beet is even more than that stated above. In that loss no allowance was made for the sum deducted by the foreign importers for what is known as "tare" (query, does this mean *terre* or soil?), that is, for the earth which clings to the roots. In my case this came to £1, 9s. 9d. Also, there was a further deduction made of 8d. per ton for the loading of the beet into barges at the port. So the amount actually received by me was only £8, 13s. 7d. To show that I am not alone in my misfortunes, I print here an extract from a letter written by a neighbour to the *Eastern Daily Press*, which sets out his experiences of this crop. Although his return was better than mine, I gather that like myself he has no intention of making further experiments with sugar-beet.

SIR,—In your report respecting the meeting on Saturday of the Norfolk Chamber of Agriculture, in referring to my experiment of growing 5 acres of sugar-beet you have made it appear that I have a profit of £18, 6s. 2d. This is inaccurate; the account is as follows:—

Five acres sugar-beet, total expenses per acre,



£11, 5s. 5d., or £56, 7s. 1d. for the 5 acres. Gross weight of beets, 38 tons 17 cwt.; net weight after deducting tare, 34 tons 16 cwt.; at 17s. per ton, £29, 11s. 7d., leaving a loss of £26, 15s. 6d. on the 5 acres. . . .

28th November 1910.

Mr. Tesdorpf discussed with me this matter of the growing of sugar-beet in England. He said that in his opinion it would fail, and when I inquired why, replied because we had not enough sunshine, without which the beet could not do well. I asked him if there was more sunshine in Falster island than in the southern and eastern parts of England, and he replied that he thought so. I am making inquiries upon the point, the results of which I hope to be able to incorporate in these pages.<sup>1</sup>

For my own part, so far as the prospects of the undertaking in England are concerned, I fear the assumed lack of sunshine less than the conservatism of our farmers and the labour difficulty to which I have alluded. If farmers will not grow the beet, no sugar factory can prosper, and I doubt whether it

<sup>1</sup> A correspondent in Denmark writes as follows on this matter: "The Meteorological Institute informs me that it has no registered sun autograph (record) for Lolland-Falster, but that the duration of sunshine calculated on the 'middle sky' (?) for thirty-six years gives 1430 hours per annum of sunshine on the islands Lolland-Falster."

On turning to the *Weekly Weather Report* for 1906, Appendix iii., then issued by the Meteorological Office, London, I find that the annual average of sunshine for Geldeston, a place in my immediate neighbourhood, calculated from records extending over the twenty-five years (1881-1905), is 1621 hours; that is 191 hours more than the average for Falster. Also I find that most of the averages for places in and south of the eastern counties are equal to, and often considerably exceed, that of Falster.

It would seem, therefore, that in this particular Mr. Tesdorpf is mistaken. --H. R. H.

will be possible to persuade a sufficient number of them to embark upon the production of a new crop of which the profitable cultivation must at best give a great deal of trouble.

In Denmark and perhaps other foreign countries all these things are different, for there the growers have often an interest in the factory and therefore earn a double profit, that of the manufacturer as well as that of the producer. But this involves co-operation, and on co-operation the British farmer seems at present to turn his back. I must admit also that, in the absence of such a co-operative factory, so far as my judgment goes, those farmers who entered into five-year contracts to grow sugar-beet would do so at some risk. Lastly, the labour of lifting sugar-beet comes at a very awkward time, when most of us are anxious to be getting in our wheat and beans. In my own case, even that connected with the two acres of this crop which I have described threw me back considerably, with no good results to my autumn-sown corn.

## A GREAT FARM

THE Kammerherre Tesdorpf, my kind host at his beautiful house of Ourupgaard, is one of the comparatively few large Danish landowners, being the proprietor of an estate of about 7000 acres. There exist larger properties than this in Denmark, for instance that of Count Weddell in Fyen extending, I believe, to 30,000 acres, which unfortunately I did not see, but such properties are not common.

Mr. Tesdorpf informed me that his father was a very large landowner indeed. He sold most of his estate, but by a peculiar provision of the Danish land laws, which are so intricate that it is difficult for a foreigner to follow their details, in contravention of the usual embargo against laying farm to farm, he was able under the terms of certain Acts to reserve one out of each nine that he sold and to concentrate them in a single block. The Ourupgaard property was the result of this transaction. At least that is how I understood the matter, as to which I hope I have made no mistake. I should add that the law under which this was done has now been repealed, so that in Denmark an estate can no longer be formed in this fashion.

Mr. Tesdorpf, with the exception of a few holdings that are still held by tenants on what is known as *faeste tenure*, which will revert to him in due course, farms all this 7000 acres himself, with results that we should think remarkable in England. At any rate he

told me frankly, and without asking me to consider this volunteered information as confidential, that, not allowing for interest on any mortgages which he may have raised (I have already explained that even rich people mortgage their real property in Denmark), he makes a net profit of £3 the acre out of his land. That is to say that after paying everything his farming brings him in about £20,000 per annum, independently, as I understand, of his large interest in the sugar factory. How many landowners in England are there who by letting or farming their properties are able to pay into the bank a net £3 per acre of profit every Michaelmas Day, that is, directly or indirectly, from the growing produce of the earth? Personally I have never met a single one.

Mr. Tesdorpf's farm, or rather farms, are, I think, on the whole the most remarkable that I have seen in any land. Milk is one of their principal products, all of which, produced by 1100 cows, goes daily to Mr. Busck at the Copenhagen Milk-supply Company. The milk from this herd brings in a great number of thousands of pounds sterling a year, how many I cannot exactly remember; and the price paid by Mr. Busck is 21 öre (say 2½d.) for 2 kilos, or about 4½ lbs. English.

The first farm I visited at Ourupgaard was one of 700 acres with a beautiful cow-shed containing 200 cows. These cows produce on the average 7600 lbs. English of milk per annum. Some of them, however, do much better. Thus I saw two that had yielded 14,000 lbs. Danish each in 1909, or the enormous total of over 15,000 lbs. English, with the good average of 3.65 per cent. of butter-fat. Also there was a heifer that gave 9400 lbs. Danish of milk with the extraordinary percentage of 4.2 of butter-fat, equalling 414 lbs. of butter for the year. All these

cows had been tested for tuberculosis, with the result that out of the 1100 on the estate only two re-acted.

Mr. Tesdorpf is making experiments as to in-breeding on the plan that is advocated by some authorities, but does not yet know whether these will succeed. Ultimately, however, he hopes so to bring things about that all his vast herd will be directly descended from two or three famous milkers, and thus largely to increase their average output. His bulls, which in the sheds looked almost black in colour, are chosen not so much by their appearance as by the milking records of their dams. The result is that although the tails of some of them may be set too high according to our ideas, or they may have other defects, the quantity of milk given by their progeny and the percentage of butter-fat continually rise.

Leaving this cow-shed, where all the manure water drains into a great underground tank in the middle of the byre, I went to an enormous barn that contained the entire harvest of the farm. In one part of this barn three horses were employed in driving a chaff-cutter, doubtless because it would not be safe to use an engine in such a place. These buildings, or at least those of them that contained animals, were lit throughout by what is known as air gas.

Mr. Tesdorpf has been a good deal troubled by contagious abortion among his cows, but at the time of my visit was rid of this dreadful complaint, which he said the Danish veterinaries treat very cleverly. Also he had suffered recently from a disease that was new to him although not unknown in Denmark, which killed nine of his cows. So far as I could gather from his description of the symptoms, it must be very similar to what, when I farmed in South Africa, we

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used to know as red water. At any rate it causes blood to come from the kidneys and to appear in the milk.

This plague was always supposed to be fatal if contracted in autumn (cattle attacked in spring seldom die), but recently a Norwegian veterinary has discovered a cure for it, and I saw seven cows which had been saved by his treatment. Mr. Tesdorpf believes that the sickness is caused by eating something, what he did not know, and pointed out to me a great field of clover from which he had removed the cattle upon this account. Also he said that it generally afflicted animals which had been grazing in woodlands.

When I asked the scientific authorities at the great Agricultural Institute in Copenhagen about the matter, however, they told me that they believed it to be caused by ticks, which seems to tally with the latest South African opinions. In Denmark, if not cured, it kills in three days, which, if I remember right, was about the duration of the acute form of the attack in South Africa. Still the identity of these ailments is only a suggestion of my own; they may in fact be totally distinct.

The calves on this property had also been afflicted with white scour, which Mr. Tesdorpf told me had now departed from among them, at the same time touching wood vigorously for fear lest this confident assertion might bring it back. As a preventive of this complaint the cows, when possible, are allowed to calve in the open field, that is up to the beginning of November, where sometimes the new-born calves are found white with frost in the morning. This mode of introduction into a cold world does not seem to do them any harm. After all, many wild animals are born in the open, including all the cattle tribe, though

it is true that Nature generally arranges that this event should happen when the days are lengthening and the sun is gathering power.

On the following day I visited another of Mr. Tesdorpf's cow-byres. It stands near to his house, and compared to it that which I had already seen was a thing of no account.

Let the agricultural reader imagine a huge place containing no less than 400 cows, to say nothing of thirty or forty young bulls worth about 1000 kroner (£55) each. To a poor 500-acre farmer like myself the sight was really overwhelming. I felt like the Queen of Sheba after she had inspected the wonders of Solomon's establishment. "There was no more spirit" in me!

Here the cows stood, or rather lay, in endless ranks, so endless that the eye grew weary of contemplating them. Here were milking-machines and some of the forty milkmaids, Swedish and Finn of race, who attend upon them. Here, too, were men shaving their tails, legs, and flanks with horse-clippers in order to comply with the regulations of Mr. Busck. Here were the ingenious feeding-troughs, the huge manure tank, the arrangements for carrying food and water, and so forth, without end. It was colossal; it was an agricultural revelation! Never in my long and varied experience have I seen a farm to equal that of the Kammerherre Tesdorpf in the island of Falster. And, be it remembered, this is no fancy place run as a whim by a millionaire, and bearing as much resemblance to a common farm as does one of Watteau's piping and beribboned shepherds to the man who tends our sheep; it is a business establishment returning splendid profits. Why cannot some of our

large landed gentry go and do likewise? Why cannot they farm their own land?

Before I leave the cows I should add that, on the whole, the milking-machine used at Ourupgaard, which I believe is named the Kennedy-Laurence, has proved so satisfactory that Mr. Tesdorpf proposes, or proposed, to substitute it for hand milkers throughout his herds.

Departing from the byres, I went to visit a field of sugar-beet 180 English acres in extent. Here I may mention that this particular home-farm is divided into eight fields of the same area, namely, 180 acres. The rotation followed on it is as follows: (1) wheat; (2) sugar-beet; (3) barley; (4) sugar-beet again; (5) oats; (6) barley sown down with clover; (7) clover, half of which stands two years and half of which is fallowed in the second year, thus allowing one fallow of all the land in sixteen years in order to rest it and exterminate weeds.

The sugar-beet were a close and healthy plant. I measured them with a rule, and found that they averaged 15 inches from row to row and 8 inches from beet to beet. Mr. Tesdorpf stated that a usual crop of these beet is 12 tons per acre, but I cannot help thinking that his must come out at more than this figure. If they do not, it is difficult to understand under what circumstances are grown the weights of from 15 to 20 tons the acre of which we hear in England, as I could not see how it was possible for land to give a much larger increase of this particular root.

The soil here is manured as follows: 12 tons per acre of farmyard muck, 3 cwt. of super-phosphate, and 2 cwt. of nitrate of soda. The cost of cultivation, including every expense, namely, drilling, thinning,



three cleanings, delivery, fares of girls from Poland and back 40 kroner (£2, 5s.) each, wages and food of the said girls, &c., amounts in all to £6, 10s. per English acre. The produce, averaging on this particular farm from 280 to 300 cwt. (14 to 15 tons), sells at 1 krone 7 öre the cwt., or roughly £1, 3s. 6d. the ton. These, at least, were the figures given to me.

About 100 Polish girls are imported yearly in connection with this beet-growing industry by Mr. Tesdorpf, who employs a special collector to hire, manage, and return them to their homes. They arrive on the estate in April, and are sent back to Poland at the end of November. They are paid by the piece and can earn as much as three shillings a day, in addition to which they receive lodging, 2 lbs. weight of hand-skimmed milk, and 3½ lbs. of potatoes per diem. Without the help of these women it would be impossible to deal with the beet crop, which is a fact that must be borne in mind in considering the possibility of establishing this industry in England, where in most districts the women will no longer work. Only women and boy Poles visit Denmark to do agricultural work; the men do not come.

I saw them at their toil in the field, and went up to two of them, for they appear to labour in pairs. They were curious, monkey-like girls, apparently about sixteen years of age, small, but very strong and healthy. One of them I noted had a pretty face. Their costume was of the simplest: a rough brown robe, under which I understand they wear little or nothing; their brown legs and feet were bare. They pull the beet with the right hand and use the special fork with the left, driving it in with the naked foot. That is, the right-hand girl does this; but the left-hand girl labour-

ing alongside of her reverses that order, using the left hand and the left foot where her companion uses the right foot and the right hand. They work hard and very swiftly, employing just sufficient force to get the root up and no more. Sometimes it is dragged from the soil by the hand alone, and sometimes the fork must be used to help it forth.

I borrowed the instrument from one of them and took a turn at the business. As a result I found that I broke about one root in three, which caused these funny little creatures to giggle at my inexperienced efforts.

Another girl followed the pair, piling the pulled beet into heaps. When their tops have been trimmed off they can lie in the open till the end of October, after which, if they have not been conveyed to the trucks and removed by the tramway, they must be clamped to protect them from frost. Further on were yet other women who were engaged in cutting the crowns off the beet.

Mr. Tesdorpf informed me that these Poles are very superstitious, and entirely under the influence of their "popes" or priests. Also their ideas as to the rights of property are vague. Thus in walking through his gardens I caught sight of an apple cunningly hidden away. When I called his attention to it he said that doubtless this was the work of one of the Polish girls, who would come to fetch it at a convenient season.

Leaving the sugar-beet, I visited some others of the great fields on this remarkable estate. In one of them fourteen horse teams were employed in ploughing a second-year clover lay for wheat, besides other teams that were rolling, harrowing, and drilling the wheat upon the further side of this particular plot of 180 acres. After clover the custom here is to

I should add, by way of comment, that Mr. Tesdorpf provides no less than 170 cottages in which his labourers dwell, and that to each of these houses are allotted five tøndeland of ground, which virtually constitute a small-holding. I gathered, however, that the tenants work these in their spare time with the help of their families. They do not look to them for a livelihood. Evidently on this matter of small-holdings Mr. Tesdorpf's bark is worse than his bite.

## SOME FALSTER ISLAND FARMS

AFTER leaving that agricultural Mecca, Ourupgaard, I set out to visit some farms in the neighbourhood of Nykjöbing. The first gentleman I called upon was Mr. Paul Rasmussen, who owns 50 tøndeland of good land and 35 tøndeland of ground reclaimed from a neighbouring swamp. This reclamation has been undertaken by a company, and is paid for by a mortgage given over the regained area. The land when reclaimed consists of sand over clay. On this grass is sown, and after the grass oats. Then comes grass again for three or four years, which, after manuring with farmyard muck and artificials, is once more put under oats, and so falls into a regular course of cultivation.

Mr. Rasmussen inherited this property, on which, for a wonder, there was no mortgage. A little while before I visited him he had met with a misfortune in the shape of a fire which burnt down the whole place. He was insured for 20,000 kroner (£1108, 6s. 8d.); but the rebuilding of the house and premises, which were in course of completion at the time I saw them, had cost him 30,000 kroner (£1662, 10s.).

Of their sort these premises were excellent. The house was just what such a house should be, and near by were a big barn with a cement floor, a cow-shed with accommodation for twenty-five cows and having a fireproof roof of reinforced concrete, a stable for six horses with tiled roof, bedroom for man, and loft

containing a circular cement water-tank and belt-driven chaff-cutter. Also there were a splendid piggery under cover, a calf-house and manure-tank in course of building, a sunk storage place for beet, water laid on everywhere, an implement shed with an eight horse-power oil-engine that drove thrashing, chaff-cutting, and pumping machinery, and was to manufacture electric light not yet installed, a grinding mill, and other conveniences. This engine cost 1750 kroner (£97).

Mr. Rasmussen kept thirty-seven cattle in all, which, by the way, had been saved in the fire owing to the fortunate circumstance that they were tied to the stalls with ropes that could be cut, and not with chains. His cows produced 150,000 lbs. Danish of milk per annum, all of which went to a co-operative factory of which he is the chairman. Also he had six horses, two of them colts, and had recently sold two foals, a number of pigs, and two calves—a heavy stock for a farm of about 100 acres in all. Indeed one of the mysteries of Danish farming is by what means those who practise it manage to make a small area of land support so many animals. I suppose that the system of tethering offers a partial explanation; also a great deal of cake and other food-stuffs must be bought.

Here is Mr. Rasmussen's seven-year rotation for any given field:—

(1) Wheat; (2) sugar-beet; (3) barley; (4) man-gold on one half of the barley stubble and vetches mixed with oats on the other half; (5) oats laid down with clover; (6) clover; (7) fallow.

Mr. Rasmussen employed four men. Among these was a fodder-master who had been eight years in

America and returned to Denmark because he did not like that country, although he told me that his wages there were higher than he could earn at home. This fodder-master received 500 kroner (£27, 14s.) per annum, and the three other men from 300 to 400 kroner (£16, 12s. 6d. to £22, 3s.). In addition, all four of them, unmarried men, were fed and lodged.

If this food with lodging is worth 10s. a week, it would bring up the total wages of the foreman to nearly £54 a year, and of the others on an average to £45, 10s. It is commonly said that Danish labour is considerably cheaper than that in England, but this instance, to say nothing of some others that I have quoted, scarcely seems to bear out the statement. Even if the board and lodging cost considerably less than 10s. a week, the wages would appear to be as high as they are in Norfolk and many other English agricultural districts.

Mr. Rasmussen informed me that he considered that the local farming was very successful on the whole, and paid if the stock did well, although personally he was out of pocket at the moment owing to the heavy expense of his new buildings. He thought that on the large farms the cultivation of sugar-beet was a great help, but that the small farmers could not grow it to advantage, as it was a crop which required a great deal of attention, and they must devote themselves to their stock. Also they needed all their land to produce corn and fodder. He told me that State small-holders were scarce in that neighbourhood, as the land was too good and valuable to be bought by help of any advance that the Government would allow. There were, however, plenty of little men who owned from 3 to 10 tøndeland. These were doing well, and

if they were skilled and steady and had helpful wives, could live out of their holdings without working for others.

Mr. Rasmussen struck me as a most capable, sterling man, just what a small farmer should be. Also he was what is called "up-to-date," for while we were talking suddenly he sprang to a window, and grasping the transmitter of a telephone that was hung inside, did some piece of business through it. It is difficult to imagine a 100-acre farmer in England availing himself of the telephone in this fashion. But then that instrument is almost universal in Denmark, and, being as perfect as possible, saves most people one or two hours of time in every day. I have no doubt that it is most useful to the agriculturists of that country, and may be reckoned as one of the factors of their apparent success.

Conducted by Mr. Rasmussen, I visited the pumping-station of Bötö Nors, where lies the reclaimed land of which I have spoken. This reclamation, said to be one of the most successful in Denmark, was begun in 1870. Since that date 4000 tøndeland have been won, leaving 5000 tøndeland, which lie 5 feet below sea-level, still to be reclaimed.

This 12,000-acre swamp belonged to the State, which granted it, subject, as I gathered, to a nominal rent of 200 kroner (£11) per annum, to a co-operative company of "adventurers," whose property the reclaimed land remains in proportion to their shares. The company obtained a first loan of 60,000 kroner (£3325), and subsequently another loan of 22,000 kroner (£1133, 10s.), with which to provide wind motors to keep the reclaimed land adequately drained. I could not discover that any other moneys had been

raised. By help of this small sum a canal has been cut to the sea about a mile away, and a large wooden screw-pump, driven by steam, erected that throws the water into the canal, which pump is operated when the wind motors cannot deal with the drainage accumulations.

The reclaimed land, whereof a wide vista is visible from the sluice, is worth about 200 kroner (£11) per tøndeland, or say £10 an acre. This of course is a low price compared with the value of the best agricultural soil in this part of Falster, which, I was told, is estimated at about 1000 kroner (£55, 8s. 4d.), or a little over £40 the acre, but doubtless this reclaimed soil will gather in worth as time goes on. What astonishes me is the modest figure at which the reclamation has been effected.

Recently I have been concerned officially in visiting and looking into the cost of reclamations—or attempted reclamations, for many of them have proved failures—in Ireland and elsewhere, and was astonished at the great sums that have been spent upon them, sometimes to no purpose. Here in Denmark the story seems to be very different, though of course there may be engineering reasons to account for a part of the discrepancy. Or possibly I may have misunderstood or been misinformed as to the expenditure on the Danish venture at Bötö Nors. The fact remains, however, that everybody seems to be satisfied with its results, whereas in Ireland and elsewhere there has often been a different tale to tell. Probably good management has to do with this fortunate issue of the enterprise.

Another farm that I visited in this neighbourhood was that of Mr. Chr. Larsen at Marrebæk Fiskebæk, who farms eighty tøndeland, of which fifty are good



soil and thirty reclaimed marsh. This property was also inherited, Mr. Larsen's family having been in possession of it for some generations, but on it there are both a first and a second mortgage, I do not know to what amount.

The farmhouse is one of the most charming in appearance that I saw in Denmark, being a fine old timbered building arranged in a quadrangle. Attached to it is an excellent steading, including a barn then filled with wheat, barley, and oats, a good cow and horse stable, a roofed-in yard for manure, and a storage pit which held 35,000 kilos of sugar-beet refuse or *schmetzel*.

Mr. Larsen kept forty horned stock, of which twenty-seven were cows, also six working and five young horses. Milk is his stand-by, and as usual goes to a co-operative dairy. His average yield was 7700 lbs. Danish per cow, but he expected that this would rise to 8000 lbs. per cow in the following season. He owned, and showed me with pride, a prize-winning Jutland stallion named "Franz of Munkedal," valued at between 5000 and 6000 kroner (or say £300), which is worked with the other horses, and several foals and young animals bred from it. Also he had two fine mares, the mother and sister of Franz, one of which had taken a first prize at some large show. In the byre stood a noted bull named "Cyrus," co-operatively owned by four or five farmers, and kept on this place. This animal has raised the butter-fat average of its offspring by  $\frac{1}{2}$  per cent., so that now this stands at over 4 per cent.

Mr. Larsen grew the usual crops of wheat, barley, oats, and sugar-beet, and I saw his fine cows, all of them blanketed, pegged out upon a clover field. The

house is a charming dwelling. On its south wall grew a really wonderful crop of tomatoes, which showed me that the climate of Falster must be sunny and genial. The furniture within was extremely good and solid, whilst the pictures hung upon the walls, such as an engraving of Millet's "Angelus," indicated the refined taste of the owner. Also on a shelf stood the silver cups won by Mr. Larsen's horses.

Whilst we were regaling ourselves with white port, a favourite wine in Denmark, which was most welcome to one of the party who was still suffering from the heat and smell of the sugar factory which we had visited on the previous day, Mr. Larsen talked to me of the local farming, which he said paid extremely well. This statement was fully borne out by the air of solid comfort which pervaded all the farms I saw or visited in the district, and especially by his own.

Just outside Mr. Larsen's gate I caught sight of an extraordinary-looking person. His feet were bare; he wore a tight-fitting jacket and trousers, held in place by an ornamental belt, and a really beautiful top hat that would not have disgraced Bond Street. Moreover, round his shoulders was slung what appeared to be a weapon of mediæval warfare with a mace head, and in his hand he held some instrument of weird appearance. I asked who on earth he might be, and learned that he was the village sweep in full uniform. At my request he graciously consented to be photographed.

Bidding farewell to Mr. Larsen and the sweep with the appropriate chimney-pot hat, I motored back to Nykjöbing past the reclaimed land, beyond which lies the Baltic. On this part of the coast there is,

I was told, always danger from the sea, which, as in Holland, is kept out by banks.

Motors still seem to be something of a rarity in Falster; at any rate ours frightened the agricultural horses very much. Under the provisions of the present Danish law there is a strict speed limit, and it is forbidden to drive motors after dark. This regulation does not apply to the cities, or at any rate to Copenhagen, where taxi-cabs are common.

I much regret that time did not allow me to visit the old manor-house of Høiriis, near Nykjøbing, which is said to be a most interesting place. A tale is told of this house which shows how true traditions often are. Once upon a time, hundreds of years ago, I gather, there lived a lord of Høiriis, who was a person of revengeful temper. He had a pretty wife, and a friend with whom the pretty wife became too intimate. The husband discovering this, or perhaps suspecting it only, determined that an example should be made. Indeed he bricked the lady up alive in his dining-room, and threw his friend into the moat.

So said the tradition, but now comes the curious part of the story. About a generation ago, I believe, part of the wall in the hall of the house fell down and revealed a recess carefully lined with oak, and in it the skeleton of a woman, while subsequent dredging in the moat brought up the skeleton of a man. I wonder whether the owners of the house have preserved these interesting relics, or rather those connected with the lady, *in situ*, let us say behind a sheet of plate glass, or whether, yielding to modern squeamishness, they have conveyed them away. I wonder also if the justly, or unjustly indignant husband continued to eat his

meals in the immediate neighbourhood of the oak-lined recess, and if so, whether the murdered wife and the gentleman from the moat made things at all unpleasant in the winter evenings. Were they not so gruesome, a good old-fashioned romance could be made of these materials.

## A DANISH ELEMENTARY SCHOOL

As the educational system of a country has undoubtedly much to do with the formation of the national character and its success or failure among peoples, I made up my mind if possible to visit one of the Danish elementary schools. This, as it chanced, was easy for me, as Mr. Jerndorff Jessen, a gentleman with whom I have been acquainted by correspondence for many years as the translator of books that I have written, is *skole inspektør* or headmaster of the great Skolen *paa* Duevej in Frederiksberg, the well-known suburb of Copenhagen. Accepting his kind and pressing invitation, I spent a morning in visiting this school, and record my impressions of it here, as I think they may be of interest to all students of elementary education.

The school, which is one of eight in Frederiksberg, is an imposing building, completed in 1906, with accommodation for 1350 children. Like most of the Danish schools and all of those in Frederiksberg, the education here is given without any charge. There exist, however, in Copenhagen and most of the other Danish towns, schools of a higher class that are called payment schools, where 1 or 2 kroner (1s. 1½d. or 2s. 3d.) a month are charged as an education fee. Some data connected with this Danish system of elementary education will be found set out in the paper which I publish as an appendix (see Appendix E). This paper is compiled from information furnished to

me by Mr. Jerndorff Jessen, and may therefore be taken as accurate. Here I shall content myself with setting down what I saw on my visit to the school.

First I was taken to the room devoted to Nature lessons, in which are included physics, zoology, botany, and physical geography. It is provided with circular desks, and on the walls hang many diagrams. From its windows may be seen the school garden, where boys of the fifth and sixth classes, and from twelve to fourteen years of age, are instructed in horticulture. The opportunity for such instruction is given to the cleverest lads who have no gardens of their own at home. Sixty-five boys had gardens here in the summer of 1910. They are allowed to carry away the vegetables which they produce.

Leaving the Nature-lesson room I was taken upstairs to where the sixth or head class were employed upon a reading lesson. These were intelligent-looking and well-dressed boys, one of whom read extremely well. I noticed that the master checked their pronunciation carefully, and asked questions to discover whether they understood what they were reading. In an adjoining room other sixth-form boys were doing arithmetic.

Next I went to where the seventh, or top class of girls, who are from thirteen to fourteen years old, were engaged upon a lesson in English. First these girls sang "God Save the King" for my benefit, almost as well as our own children would have done. Then they were told to read from an English book, six or eight of them in different parts of the room. There was not one whom I could not understand perfectly, while the accent and pronunciation of some of them were excellent. If a French or German

stranger were to visit any of our Board schools I wonder whether he would be able to say as much.

These seventh-class girls choose whether they will learn English or German, six hours a week being given to the study of one of these languages. Those whom I saw had of course chosen English. In answer to my questions, Mr. Jerndorff Jessen made some remarks which may be of interest to the advocates of women's suffrage. He said (I quote him verbatim):—

“I find that the girls are more intelligent, diligent, and orderly than the boys. They are at least the equals of the males. The lady teachers, too, are better than the men, and take more interest in their work. Perhaps this is because they are not so much distracted by outside matters.”

I may state here that in this, and I think all Danish schools, the girls have a separate entrance and play-yard of their own. Only children of both sexes who are under seven years of age are taught together.

The cookery-class room in this school is situated at the top of the house, I suppose in order that the smells may escape. It is a spotlessly clean place, with tables as white as snow, and drawers in which spoons, &c., are arranged like specimens in a cabinet, as are all the utensils in the adjoining pantry. It contains a gas and a coal stove for cooking purposes, also a demonstration stove with all the necessary apparatus. The cooking-class is not compulsory, but Mr. Jessen hoped and believed that it would be made so in 1911. At his school about a hundred pupils were receiving instruction in this art, the time given to it being four hours twice a week. Each class of pupils

is divided into four "families." One of these families does the cooking, another the washing-up; another the sewing, and another the washing of the linen. The general idea is to instruct the children in the various duties of an average household.

Near to this kitchen are the class-rooms for drawing, one for boys and one for girls, and the carpentry shop with its accessories. This carpentering is compulsory for boys of the fifth classes. The time given to it is three hours a week.

In all there are thirty class-rooms in this school, each arranged to accommodate thirty children at a time. Those of the youngest class are taught from eight to twelve, or from one till five. The second, third, and fourth classes, that is children from eight to eleven years of age, from eight to twelve and from ten to three, or from three to five. The fifth, sixth, and seventh classes from eight till one, or from ten to six, mostly from ten to six. The reason for these varied times of teaching is that there is not room for all the children to attend the school at once.

Out of the eight schools in Frederiksberg, six are what is called "whole-day schools," this being one of them, while the remaining two are "half-day schools." In a half-day school no pupil works for more than half a day, but in a whole-day school some of the pupils work for the whole day. Pupils must attend school until they are fourteen years of age; they are also required to pass examinations every year, but these are very easy. After the age of fourteen no examination is necessary to free them from their attendance.

On my way to the gymnasium across the asphalted play-yards, I met hundreds of the afternoon pupils pouring into the school in orderly troops. They



seemed to me healthy and happy little people and tidy in their dress. There are two gymnasiums, one for boys and one for girls, both of them fine rooms. The younger classes of boys attend here for two hours a week, and the fifth, sixth, and seventh classes for three hours a week. At the word of command a troop of lads, stripped to the shirt and wearing suitable shoes, rush in and go through various evolutions. After this they form up and drill.

On the floor above I saw the girls doing their physical exercises. These were indeed a pretty sight, dressed in their neat blue serge suits which are supplied by the Commune. Every girl, by the way, has her own suit, which is not used by any one else. The activity of these children was really amazing. Some of them climbed ropes like monkeys; others walked on bars, and others swung to and fro on trapezes or in great iron rings, all of them doing this and that at the word of command.

There are proper dressing-rooms for these girls, whose hats and cloaks are hung up outside on pegs arranged along the stairs.

Certainly this school is a remarkable place, and one that I am glad to have seen. For further information on the matter of Danish elementary education I refer the reader to Appendix E.

## THE ROYAL VETERINARY COLLEGE, COPENHAGEN

THE last, and I may add the finest institution that I visited at Copenhagen was the great Landbohøjskolen, or Royal Agricultural and Veterinary College, where I was most kindly received by Professor B. Bang, the famous authority on animal tuberculosis, and by Professors T. Westermann and K. Rørdam.

This college, which was founded in 1783, was at first a veterinary college only, but afterwards its sphere was extended so as to include agriculture and chemistry. In 1858 the veterinary college was combined with the college of agriculture and general gardening of all kinds, or rather of the scientific and non-practical sides of these arts. Also schools for land surveyors and pupils in forestry were added. In the years 1892 and 1893 the college was enlarged, the State contributing about 1,000,000 kroner (£55,416) for this purpose.

The curriculum is as follows: Every student first goes through a general course in botany, zoology, chemistry, and physics. Those who take up land-surveying and forestry also learn mathematics. Foresters, surveyors, and veterinaries receive a practical education. Agriculturists and gardeners receive only a theoretical education, as they are supposed to be acquainted with the practical side of their vocations before they come to college.

After the first year's course the veterinaries are examined in the "fundamental" sciences, that is, in botany, zoology, chemistry, and physics. Afterwards they must take a course of practical veterinary work of three and a half years' duration. When this is finished they receive their diplomas as fully qualified veterinaries.

The routine is the same in the case of land surveyors and foresters. After passing a preliminary examination at the end of the first year, these specialise for another three years and then receive their diplomas. Land surveyors, however, must spend a further year in practise before they obtain what is called the Royal diploma, which confers on them the right to practise privately. Also they must go for two months to the Land-Reclamation Society, which is known as the Heath Society, at Viborg in Jutland. There they study the reclamation of sand-dunes by means of planting them with *Pinus montana*, and the conversion of peat-bogs into grass and corn-lands, for the most part into grass.

Foresters are required, in addition to their three years' course, to spend a year in the practical study of forestry under the supervision of a royal forester. This year must be taken not before or after, but during the course.

As I have said, agriculturists and gardeners are supposed to be acquainted with the details of practical agriculture and gardening before they enter the college. Therefore they receive theoretical and scientific education for two years only. Those agriculturists, however, who do best in their examinations can take a supplementary higher course of twenty-one months' duration on any of the following lines:

(1) In the fundamental sciences, that is in botany, chemistry, zoology, soil-study, agricultural chemistry, and mathematics. (This course is for those students who desire to become teachers and experts.)

(2) In agriculture, ordinary and special, that is the cultivation and amelioration of the soil, agricultural chemistry, and the growing of sundry crops.

(3) In the breeding, tending, anatomy, and diseases of animals, &c.

(4) In every branch of knowledge connected with dairy-work.

The college receives women as well as men. The women study gardening, agriculture, and in one case, land-surveying. Also ladies come to it from cooking-schools to the number of thirty or forty a year in order to acquaint themselves with the fundamental sciences enumerated above. These ladies pass a special examination, but the college does not grant them any diploma.

The total students, male and female, number from 400 to 500. Of these 200 study the veterinary sciences, of whom a varying proportion come from Norway, where, as I was told, no veterinary college exists.

Of agricultural students there are from 100 to 120, some of them natives of foreign countries. Thus at the time of my visit there were several from Finland, one from Bulgaria, and one from Roumania. The land-surveying students average about 40, the forestry students about 60, and the gardening students about 20. Most of the students begin their course at from eighteen to twenty years of age; but there is no age limit—they can enter at any time of life.

The term lasts from the 1st of September to

the 1st of the July following, with a vacation at Christmas. All students live out, and the fees for tuition amount only to about 100 kroner (£5, 10s. 10d.) per annum. Under the constitution of the college, however, at least one-fourth of these students must receive free instruction. Of this fourth, a half, selected according to their ability and necessity, are granted money scholarships amounting to 20 or 30 kroner (£1, 2s. 2d. to £1, 13s. 4d.) per month. The college is supported by the State, which grants to it 448,000 kroner (£25,000) per annum.

The first place I visited in the great square of buildings which form the college was a large lecturing theatre that holds 300 persons. Then I saw the rooms devoted to agricultural chemistry, physics, land-surveying, physiology of plants, photography, and an experimental laboratory. Next I was taken to the reading-room, which is open to any of the public for five hours a day, as well as to the students. Here are to be found all the works that deal with the special subjects connected with agriculture, collected from the various countries of the world, including the British colonies. Certain students have the privilege of studying in this room at any time between eight in the morning and eight at night, especially those who are taking what is called the further course. Of these I saw a number sitting at their work.

Near by is the library, which contains 50,000 volumes. From this library books are sent out free of any charge, except for postage, to whoever may apply for them in Denmark. No security is asked, and I was informed that it is a very rare event for a book not to be returned. I was much struck by this circumstance, which caused me to wonder whether

a similar trustfulness on the part of, let us say, the British Museum, would prove to be justified by results. The outside circulation of this library, including that of the reading-room, but excluding that of the use of the ordinary reference library, amounts to about 10,000 volumes a year.

Upstairs is the dairy department, where is to be seen a beautiful model of a dairy given to a famous man who died in 1902, Professor Segelcke, who was the founder of the modern system of Danish dairying. From this I was taken to the department of agricultural chemistry, which accommodates 60 pupils, and has a special chamber containing eight sets of very fine scales, capable, I understood, of weighing a grain of dust. Here, too, were the students' laboratory, an experimental room, and another for two lady assistants in this work. The professor in charge of it, by the way, informed me that at such tasks he found women to be more skilful and reliable than those men who could be obtained at the wage which the college can afford to pay.

Next I saw the mineralogical collection arranged for the instruction of the students, which, needless to say, was excellent, and the land-surveying department, filled with the appropriate instruments for the survey of agricultural land. (All topographical surveys in Denmark are carried out by the military authorities.)

After these came the department of common and special agriculture. Here was a remarkable series of the different soils of Denmark. Each specimen of soil is dug out to a depth of about 2 feet, pulverised and analysed in three sections, namely, from the surface to 20 centimetres deep, from 20 to 40 centimetres deep, and from 40 to 60 centimetres deep.

Then there were exhibits showing the development of the root action of oats under different treatments. One of these, as carried out by the Chinese, who apparently earth up their oats as we do potatoes, was especially interesting. Here, too, were a map of the State Experimental Stations, and tables showing the amount of the grants of public money made to them. In 1899 these were nothing, and in 1908 100,000 kroner (or about £5540).

Another table showed the comparative value of the crops in Denmark. In 1897 this amounted to 375,000,000 kroner (or £20,781,250), and in 1909 to 560,000,000 kroner (or £31,033,333), an increase of no less than 185,000,000 kroner (or £10,252,083) in twelve years. In the same way the comparative value of the crops per tøndeland was shown. In 1897 this amounted to 114 kroner (or £6, 6s. 3d.) per tøndeland, and in 1906, the last year of which I could see a record, to 138 kroner (or £7, 13s. 1d.) per tøndeland, a difference of 24 kroner (or £1, 6s. 6d.) per tøndeland. I wonder what would be the result of a comparative valuation per acre of the crops in England over the same period of years.

Also there was a record of the number of experiments made by the various agricultural associations in Denmark to demonstrate what varieties and quantities of artificial manure are suitable to the different soils of the country. In 1909 these totalled no less than 1700 separate experiments.

Amongst many too numerous to mention, another most useful exhibit was that of the root actions of wheat, oats, and barley in rich and poor soils, but to attempt to describe it here would be difficult, if not hopeless.

Leaving these various departments I passed through the collection of agricultural implements sent to the college by manufacturers for the purposes of advertisement, to a pit in the gardens which is covered over with a wire roof. Here by wondrous scientific means are shown the effects of rolling, harrowing, and other agricultural operations upon the moisture contained in soil. Other demonstrations in or about this pit indicate the exact quantity of nitrogen that is lost in winter and in summer under different cultural conditions. Yet others reveal the results of cultivation carried out on sundry soils under the stimulus of certain manures. I can only say generally that all these series of experiments are of a fascinating character. They must prove of great use to those who study scientific agriculture.

Next came the anatomical department, filled with the skeletons of various animals, and with beautiful "preparations" of the nerve and other structures of their bodies. Near to this was the zoological collection, in which are shown specimens of all forms of life from the lowest up, and specimens of morbid anatomy or animal diseases, such as tuberculous udders, to mention only one of them. Then there was the microscopic room, and the great dissecting-hall, a somewhat gruesome place to visit.

From this I was taken to the veterinary department where sick horses and cattle are lodged—the horses for a small payment, and the cattle, especially cows, for nothing, as these are needed for the purposes of instruction. Here is an operating theatre, a large place floored with tan, having many windows, and close by another department for medical cases with an exercising room attached. Also there is a stable



where cattle and horses suffering from internal diseases are treated, and a house for sick poultry.

The last department which I saw was that for lost and ailing dogs, where the latter are doctored at a charge of 70 öre (or about 8d.) a day, and when necessary operated upon. Distemper, too, is dealt with in this place, and I even noted an indisposed parrot that was receiving suitable and skilled attention.

Here I must close a brief and inadequate description of this wonderful college, to which it would not be difficult to devote half the pages of a book.

## THE LESSONS

THE account of my Danish experiences, or rather of a selection of them, is now ended, and the question arises—What conclusions result? What is there to be learned from them? In this book I have followed the plan which I adopted in "Rural England," namely, that of reporting quite fairly and as accurately as the circumstances would allow, what I saw with my own eyes and heard with my own ears. I should explain, however, that as the use of a foreign language was involved, the sense of which for the most part reached me through an interpreter, mistakes may have arisen, especially in names and figures. In the same way documents of a technical character, from which sometimes I have been forced to drag the contents by help of a dictionary, may not always have yielded up their precise meaning. Difficulties will also occur where every money value, every weight, area, and system of measurement has to be translated into other values, weights, areas, and systems. Still, after due allowance is made for such obstacles, I think I may say that what is set down in the foregoing pages can be accepted as substantially correct.

At any rate it has the merit of being entirely uncoloured by any predilections that the author may possess. It is an honest attempt to arrive at the truth of the matters under examination, and amounts in effect to a report upon them.

But what is that truth? Perhaps any reader who

has taken the trouble to study the foregoing pages and the accounts given in them of sundry sample farms that I visited, and of the views of the various authorities whom I interviewed, will be in as good a position to answer the query as I am myself. Still, while my mind is full of the business, I would venture on some comments.

## THE ECONOMIC POSITION OF DANISH AGRICULTURE

WHAT is the real position of agriculture in Denmark? Or to put the question in another way, What is the position of Denmark economically, since that land depends upon its agriculture? In her case agriculture is not a side issue or a plaything; it is the breath of her nostrils. If in Denmark it were reduced to the relative position which it holds in the national life of Great Britain, for all practical purposes she would die. Therefore to her, at any rate, the real answer to the query is of vital importance. Before such an answer is attempted, let us briefly consider the underlying facts.

Denmark is a very small country, with an area of under 10,000,000 acres—I believe less than half that of Scotland—and a population of a little over 2,590,000, or about half that of London. Of this population one moiety lives entirely by agriculture, while of the remaining half a large proportion, I cannot say how large, lives indirectly out of the land or on those by whom it is cultivated.

This land, so far as I am a judge, is, I should say, after travelling through it from the north to the south, on the whole indifferent in quality.

Indeed for great blocks of it an English tenant-farmer would scarcely pay a rent of 7s. 6d. an acre. Much of what the thrifty Danish agriculturist points out with pride as good soil we should call poor, sand-

riddled stuff, a famished country. Moreover, the climate is not of the best, and for a great part of the year damp and cold, so that the stock need much housing. In short, considered from an agricultural point of view, the British Isles far surpass Denmark in natural advantages.

Here, as the point is important, I am glad to be able to supplement my own opinion by that of the Scottish Agricultural Commission as set down in its most excellent Report published in pamphlet form in 1904. The Commission says :—

“The sandy detritus of the ice age, the scrapings of hard crystalline rocks, has given Denmark more poor than good land, and much of it we could know by no other name than a ‘hungry soil.’ Nor is the climate congenial. The situation is insular, but the islands and peninsula constituting the country are in proximity to the cold German Ocean on the one hand and the icy Baltic on the other, while they are near enough Finland and Russia to come under the influence of the rigorous cold of a continental winter. As the country is low-lying, and either flat or undulating, there being no sheltering hills—the highest point above sea-level is 550 feet—the country must often be exposed to the fury of harsh, sweeping winter winds. The summer, although very good, is so short and dry that oats have scarcely time to grow and mature an abundant crop, and one of the problems engaging the attention of experiment stations in Denmark is to find a variety that can be sown one year and harvested the next; while farm live-stock have to be comfortably housed and tended within doors for the greater part of the year.”

Notwithstanding these drawbacks, in addition to

what it consumes at home, Denmark, according to the *Danish Export Review*, sent away in the year 1908 agricultural produce to the value of £20,956,550, nearly all of it to the United Kingdom. This it was able to do in spite of the comparative density of its population, namely 174 per square mile, which, although it cannot compare with that of England with its vast cities,<sup>1</sup> considerably exceeds that of Scotland (135 per square mile), and even that of Ireland (144 per square mile). To be more precise, the value of the butter, bacon, and eggs imported into these islands from Denmark in 1908 amounted to about £18,500,000—an enormous total, that for a long while past has been steadily rising year by year. Whether it has yet attained its maximum I cannot say.

As against this volume of exports, however, there is a large importation of food-stuffs, &c., as the following table of the foreign trade of Denmark in 1908 will show. I would call special attention to the amount spent by Denmark under the heading of "Fodder, cake, seed" :—

*Foreign Trade of Denmark in 1908*

	Imports for Consumption in 1000 Crowns.	Exports of Home Produce in 1000 Crowns.
Food-stuffs . . . . .	141,464	382,695
Clothes . . . . .	103,573	4,761
Firing material . . . . .	44,494	28
Fodder, cake, seed . . . . .	113,246	2,042
Raw materials, agricultural and industrial implements, &c. .	147,962	49,992
Totals . . . . .	550,739	439,518

<sup>1</sup> I understand that the rural as distinguished from the town population of Denmark is twice as numerous per square mile as that of England. This seems to suggest that the actual land is supporting twice as many people.—H. R. H.

That the country seems to be in a good financial state is indicated by the fact (here I quote from *Whitaker's Almanack*, as it gives the figures in English pounds sterling) that in the year 1908-9 the revenue amounted to £5,228,036 and the expenditure to £5,288,507, which shows an excess of about £60,000 of expenditure over revenue—not a large one when compared with that of many other countries. Also it must be remembered that whereas in the year 1907 the Public Debt amounted to £14,329,544, in the year 1908 it had been reduced by £111,033, which more than balances the slight excess of expenditure over revenue. It would seem, therefore, that this large export of agricultural produce is not attained by means of any reckless domestic expenditure.

To return to the point from which I started: the inference appears to be that the position of Danish agriculture is eminently and increasingly good, so far as can be judged from an examination of the national resources. It remains to be considered whether the farmers who between them store up all this agricultural honey (which we eat) are or are not really prosperous.

Certainly to the eye of the observant traveller they show every sign of prosperity. All over the country he sees their herds of cattle, and the new houses and steadings that have recently been or are in the course of being erected. Inquiry does not tell him that an undue proportion of them fail; indeed, although this may have been accidental, except in the case of a few State small-holders I heard of no agricultural bankruptcy while I was in Denmark. It would seem that they and their children, and their farm-servants who board with them, live well, as their healthy appearance

indicates. Obviously also they dress well and can afford to travel a great deal on the railways. Further, those whom I saw, and I think that I talked with representatives of most classes of land-holders in Denmark, not confining myself to men who owned fine farms, almost without exception told me that they were satisfied with their lot and looked to the future without fear. This evidence in its sum without doubt suggests prosperity. I may add that in Denmark there is a remarkable absence of the usual evidences of destitution. Thus during all my journeyings there I saw but one beggar—a very half-hearted member of his tribe, whom I met in the less fashionable quarter of Copenhagen. The roads, too, so far as I observed, were quite free from tramps. Also, although spirits can be bought for about sixpence a bottle, there is practically no visible drunkenness, except occasionally among foreign sailors at the ports.

On the other side of the account, however, must be set the fact that these freeholders—for I believe that over 90 per cent. of the Danish farmers own the land they work—are considerably mortgaged. Probably it would not be too much to say that on an average they have borrowed up to half the value of their estates, which, if my memory serves me, is almost the limit to which the Credit Unions will advance. (I am not speaking here of the State small-holders, whose case must be treated separately.) As I have remarked, most Danish landowners, rich or poor, seem to obtain working capital on the security of their land, encouraged thereto doubtless by the comparatively cheap rate at which such loans can be raised.

I have no information as to the extent to which real property is mortgaged in Great Britain, and doubt



whether any is available. If it were it might be discovered that our land is on the whole as heavily burdened with debt as that in Denmark. Only there is this difference between the British and the Danish charges. The former involve the payment of an interest as high, or often higher than the latter, and do not include any provision for sinking-fund. Nor in Denmark can the advances suddenly be called in to the great inconvenience and expense of the borrower, who in such circumstances will certainly be faced with a lawyer's bill.

It is easy, therefore, to form a too pessimistic conclusion as to the indebtedness of the Danish landowner, when compared with that of the landowner at home. All mortgages of lands there are, I believe, recorded in a State register, so that any one interested in a particular property can learn the facts concerning it without trouble. The dues payable on the purchase of a property, except State smallholdings, where they are nominal, appear to amount to about 2 per cent.

Still the existing state of affairs has its critics in Denmark. Thus I have received a long letter from a gentleman who imports and exports hay, straw, and potatoes. As he does not wish his name to be mentioned, for the sake of convenience I will designate him by one which indicates his attitude towards the modern Danish agriculture, that of "Jeremiah."

Jeremiah, from whom I shall have occasion to quote on various matters, says upon this point: "I do not remember the mortgage figures that represent the indebtedness of Danish agriculture, but I know that these figures are enormous and that they show that we have gone back economically. I think that

this bad state of affairs has been brought about by the co-operative movement and by the loans that can be obtained too easily through Credit Unions, Hypothek Unions, and Houseman Credit Unions."

There is something to be said for this conclusion, although personally I do not agree with it; but here I will leave Jeremiah for the present. When I come to the questions of small-holdings and co-operation I shall have to refer to him again.

## FARMING IN DENMARK

I WILL pass on from this question of the general prosperity of Danish agriculture to that of the quality of its farming. The charge brought against most visitors to Denmark who venture to extol its agricultural methods, is that they have only inspected the "model farms." I do not quite know what is meant by this description "model farms," as I did not chance to see any in the course of my researches.

England is the country of model farms, by which I understand home-farms run at great expense and as a hobby by very rich men regardless of the losses incurred upon them. Generally these include a dairy with fancy tiles.

Such places, so far as my experience goes, are not to be found in Denmark. There are wonderful farms such as that of Kammerherre Tesdorpf, and remarkable farms such as that of Mr. Grut Hansen. But all of these are managed as business propositions. However this may be, I tried to study Danish farms of all descriptions, and in driving about the country took very careful note, as any one with experience can do, of the state of many that I did not actually visit.

My observations led me to the conclusion that there are very few farms in Denmark which can equal the best we have in Great Britain. Indeed, that of Mr. Tesdorpf at Ourupgaard was the only one I saw which could be placed in the same rank. Moreover, the

conditions prevailing on many of the Danish farms do not at all commend themselves to our ideas.

For instance, the cows are kept too hot and without sufficient ventilation, the manure-tanks and muck-heaps might sometimes be better disposed, there are too many flies in the piggeries, and so forth. Also the general aspect of the places is often untidy, owing largely to the absence of fences, while the majority of them lack that Christmas-card kind of picturesqueness which we associate with the English farmstead.

These are their drawbacks, but here, as usual, there is something to be said on the other side. Thus, except for the matter of tuberculosis, which probably is fostered by the closeness of the byres, the unhealthy condition of some of them, if they are unhealthy, does not greatly matter, since the milk produced there goes straight to the factory, where it is sterilised by heat, which kills tuberculous and any other germs it may contain. Moreover, such milk as is intended for consumption in the towns—witness the Copenhagen Milk-supply Company—as the reader will be aware, is produced under the most perfect conditions possible. Upon how many milk farms in England are Mr. Busck's regulations, or anything like them, strictly carried out?

Putting aside these matters of the doubtful state of some of the byres and of the untidiness, it can scarcely be questioned that in this way or in that the hard-working Dane gets more out of his land than does the average English farmer. He keeps more cattle on a given acreage, he farms more intensively, he manures with greater skill and care. The liquid which we allow to run away is, for instance, used to the last drop. The average English farmer set

down upon the average Danish holding would starve there in three years unless he changed his methods. Or rather he would not remain to starve, since at the Michaelmas following his entry he would give notice to quit. But as in most cases the Dane owns his land, there is no one to whom he can give notice. Either he must stay and wring a living from the earth, or he must sell it and take to some other occupation. As a rule he stays and does fairly well.

Obviously one of the secrets of his success lies in the number of his cattle and pigs, which means a corresponding amount of manure wherewith he enriches his poor soil. Years ago the Danish farmer used to produce grain. Then came the foreign competition, against which he was unprotected by any tariff, and the crash.

The same thing happened at home, but there was this difference in the results. In Great Britain many, if not most of us, continued to grow corn whether it did or did not pay, for we were too conservative to vary our methods. In Denmark they changed their system and thenceforward devoted themselves to the production of milk and its products, and of pigs which feed upon the waste of the milk. Being an owner, there was no landlord to whom the Danish farmer could go to help him in his trouble, by lowering his rent or otherwise. He must either adapt himself or perish. So he adapted himself, and by aid of the mighty engine of co-operation, of which I will speak presently, was lifted to his feet again.

As compared with Great Britain, there is no doubt that the Danish land carries a heavy head of stock. Thus, to take the example of horned cattle and pigs: in Denmark in the year 1903, the last for which

figures seem to be available, there were about 1,840,000 of the former, of which 1,089,000 were cows, and about 1,457,000 of the latter. In Great Britain (I quote these figures from the *Statistical Year-book of Denmark*, published by authority in 1909, p. 201), in the year 1907 there were 6,912,000 horned cattle, of which 2,759,000 were cows, and 2,637,000 pigs.

But the acreage of Great Britain—that is England, Wales, and Scotland—amounts to 56,387,655, and that of Denmark to 9,375,403, or roughly a sixth of that of Great Britain. If Great Britain, therefore, were as heavily stocked with horned cattle as is Denmark, it ought to carry over 11,000,000 instead of under 7,000,000; and if it were as heavily stocked with cows it ought to carry over 6,500,000 instead of considerably under 3,000,000.

When we come to pigs the difference is still more marked, since upon the same rough basis of calculation, Great Britain ought to carry 8,742,000 instead of its actual stock of 2,637,000. On the other hand, however, it does carry over 26,000,000 sheep as against Denmark's 877,000, and 1,556,000 horses as against Denmark's 487,000. Still, making all allowances, Denmark appears to be, acre per acre, the more heavily stocked of the two countries, and of course in the matter of cows and pigs its proportional predominance is enormous, especially when it is remembered that the Danish statistics are six years older than those of Great Britain.

This brings me to another quotation from my Danish correspondent whom I have named Jeremiah.

Jeremiah says on this matter of the stocking, or, as he considers it, the over-stocking of Danish farms: "I think of the time when the smaller landowners were

paid very little for their old-fashioned produce, especially for butter, which was of bad quality. At this date the merchants in the towns misused them (*i.e.* the farmers), but when the co-operative pig factories, stores, and dairies arose, these paid higher prices and more money was brought home. As soon as it was found that they (the farmers) received more cash from these sources, naturally there grew up an angry feeling between the land and the town." (I suppose this means that the towns grew indignant because the land-dwellers were doing better, and this by buying their goods through co-operative stores instead of at the shops with which they used to deal.)

"But now," continues my correspondent, "comes the danger of the system, which I will ask you to lay before your countrymen. In the old days the farmers lived upon what the soil could produce. Now, however" (*i.e.* under the co-operative régime) "they all desire to be No. 1 in the matter of production of quantities of milk, pigs, eggs, &c. The farmer who formerly kept ten cows raised his stock to twenty, many of them to the point of keeping one cow on each tøndeland (that is  $1\frac{1}{2}$  acre) of his farm. This could only be done by his buying 'craft-fodder' (that is cake and the like). So we went from real farming into a state of unprofitable farming industry, and a system of feeding that brings losses. Not one out of a hundred farmers keeps books and accounts to guide him and prove that no animal can profitably digest more than a certain quantity of fodder. If too much is given to them the food will be undigested and wasted, and result in absolute loss. This is the pitiful result of co-operation. Our animals have been eating many of the millions that now clog the farmers in the

shape of mortgages with which Danish agriculture is burdened, as a result of the co-operative system."

After expressing an opinion that the said co-operative system, "well-used," will yet be a help and an "uplifting power" to the said agriculture, Jeremiah ends with the following oracular outburst: "High-schools, politics, religious parties, make people imagine themselves refined! But half-knowledge is worse than none at all."

This letter is interesting in its way. Still, it invites certain criticisms. First of all, I gather from internal evidence that the writer is no longer young. He is our familiar friend, *laudator temporis acti*, one who praises bygone things. Also, as the heading on his paper shows, he deals in hay, and therefore may have a not unnatural prejudice against artificial cattle-foods, which doubtless compete with hay. Further he is, I gather, an independent merchant who can scarcely be expected to look upon co-operative societies with a favouring eye. So it comes about that circumstances have exactly shaped him to the cut of Jeremiah's cloak. For this he is not to be blamed, but it does, to my mind, discount the value of his indictment.

Moreover, so far as my opportunities of observation went, I saw nothing to indicate that the Danish cows were eating more than they could digest; and if any of them were to do so, I am quite certain that the wonderful "control-lady" who has charge of their health would put the matter right at once. For the sake of her professional reputation and for the honour of the particular college in which she had been trained, never would she allow any bovine milk-machine under



her charge to clog itself with a single ounce too much of cake, or to be supplied with an ounce too little. In short these cows get what they ought to have in order to keep them at the highest possible point of lacteal efficiency, no more and no less. Whether as a general proposition it pays to feed them so highly is a question for the Danish farmer. He answers it in the affirmative, and, Jeremiah notwithstanding, I see no reason to quarrel with his conclusion.

A point frequently advanced in England to prove that the Danish farmer cannot really be prosperous is that he realises a lower price for his milk than is obtainable in England, Undoubtedly, to a certain extent, this is true, as I shall show in due course.

But if so, what does this fact prove? To my mind only that the Danish farmer can thrive on rather smaller returns for his produce than we are accustomed to receive in England. Moreover, there are two things that must be remembered in this connection. The first of these is that if the Dane deals with a factory, as is mostly the case, his skim milk and buttermilk are returned to him, sometimes free, but generally at a very small price, often less than their value, and on these he feeds his pigs. In that event also, as a part owner, he receives his share of the profits of the factory.

These, in 1909, appear to have amounted in all Denmark to 34 millions of kroner—or 15 per cent. of the total payments made to the co-operating members. This is to say, that in addition to the sum paid to the individual member for the whole milk supplied by him, minus the price of the skim and butter milk returned to him, there was added a proportion of the net profits earned by the factory after allowing for working ex-

penses, or of its accumulated surplus funds (see International Institute of Agriculture Bulletin, 1910).

If, on the other hand, he disposes of his milk to the Copenhagen Milk Supply, or any other distributing company, as most milk-farmers, including myself, do in England, he is paid a somewhat higher figure to compensate him for the loss of the skim and for the special quality of the milk required by such companies. At any rate, what he receives seems to leave the Danish dairyman an adequate profit as a return for his invested capital and labour. Probably it costs him less to produce a gallon of milk than it costs us in England, and therefore he can afford to dispose of it at a lower figure. Such, at least, is my estimate of the case.

I admit that, at first sight, it seems strange that the Danish farmer should be able to produce milk more cheaply than we can do in England. Three factors, however, occur to me which, taken together, may, in part at any rate, account for this result. The first of these is that except for the interest on whatever mortgage he may owe, being an owner he has no rent to pay. The second is that he probably works harder himself than does the average tenant-farmer at home, and therefore employs less labour proportionately to the number of his cattle. The third is, that owing to the extreme care taken in its breeding, his cow produces generally more milk than does the average British cow, which often is bred in the most haphazard fashion. This, of course, means that in order to sell a given quantity of milk he does not need to keep so many cows as we must do. The corollary is that as every extra cow costs money to buy, feed, and tend, the Dane can attain to equal results at a smaller annual outlay.

## CO-OPERATION IN DENMARK

WHATEVER else may be doubtful or open to argument in connection with Danish agriculture, one thing remains clear, namely, that it owes the greater part of such prosperity as it possesses to the working of the co-operative movement. Or perhaps it would be more accurate to say that this prosperity is due to the character of its people, which renders co-operation popular among them, and to the local conditions which make it feasible and even necessary to agricultural success.

As the reader may be aware, for it is common knowledge, at present co-operation does not flourish in Great Britain. Speaking generally, notwithstanding the blandishments of the Agricultural Organisation Society, which now receives a small subsidy from the State, and much individual effort and exhortation, the British tenant-farmer consistently declines to co-operate.

In support of this view I will quote a few sentences from the first yearly Bulletin of the International Institute of Agriculture. In a monograph on Great Britain and Ireland, under the section headed "The Sale of Produce," it says :—

"We find that in Great Britain co-operation for the sale of produce is still in its infancy." Again, under the section headed "Co-operative Dairying," it says : "The co-operative creamery at which butter is made is almost unknown in England." Again, under the section headed "Agricultural Credit," it says : "Agri-

cultural credit has made but little progress in England and Wales, and no credit societies have as yet been formed in Scotland. The number of credit societies is increasing slowly in England, but the aggregate business is still very trifling."

In Section 9, headed "Statistics of Agricultural Co-operation in Great Britain," we find the matter summed up. As it sets out the facts concisely and the subject is important, I quote the section :—

"The total number of agricultural co-operative societies formed by or affiliated to the Agricultural Organisation Society in England and Wales on December 31, 1909, was 319, with a total membership of 19,500, and an estimated aggregate turnover in 1909 of £860,000. In addition to these societies, the Agricultural Organisation Society, in its Annual Report for 1909, estimates that there were in England and Wales 104 registered agricultural co-operative societies, not affiliated to it, with a membership of about 24,000 and an aggregate turnover of about £1,100,000.

"This gives a total of 423 registered co-operative societies in England and Wales in 1909, with a total membership of 43,500 and an aggregate turnover of £1,960,000. The societies included 144 societies for the supply of requirements or sale of produce; 147 small-holdings or allotments societies; 14 dairy societies; 15 egg and poultry societies; 30 credit societies; 57 societies for the mutual insurance of live-stock, and 16 societies of other kinds.

"The Report of the Scottish Agricultural Organisation Society for the year 1909 contains a list of 39 affiliated societies, of which 30 were agricultural trading societies, 6 were dairy societies, and 3 were

societies of other kinds. The statistics of membership and turnover are not quite complete, but of the societies furnishing returns the total number of members was 2,332 and the aggregate turnover was £102,934."

As will be seen when we come to consider the Danish figures, those for Great Britain, given above are by comparison practically negligible.

Various reasons for this unhappy state of affairs are suggested in the Bulletin. Thus, with reference to the sale of produce in Great Britain, it says: "The markets are close at hand, and there is usually a considerable choice, not only of markets to which to send produce, but of methods of despatching it. These facts make it very difficult to induce the farmers to take concerted action."

Again, with reference to co-operative dairying, it remarks that the "English dairy-farmer is generally able to find an outlet for whole milk, and butter-making is not the most remunerative way of dealing with milk," which it seems to think accounts for the absence of co-operative creameries. As to the reason of the lack of agricultural credit facilities the Bulletin has no suggestions to offer.

That there is force in the explanations given above no one will deny. They are true, but by no means the whole truth. Thus among the causes not mentioned in the Bulletin is undoubtedly that so shrewdly stated by Mr. Schou (see p. 61), who, it may be remembered, declared as his deliberate opinion that tenant-farmers will not co-operate because, co-operative accounts being open to inspection, they fear that their landlords might raise the rents if it were found that

they were prospering. He added that only owners of land will co-operate, and I may say for what it is worth that I am much of the same opinion.

But the thing goes deeper, indeed to the bed-rock of the British nature. Most farmers in this country do not co-operate simply because they will not. Co-operation is against their traditions, their ideas, and above all, their prejudices. In any given village three of them will send three carts to the station, each carrying one churn of milk, when one cart could carry all three, rather than arrange together that two-thirds of this daily expense and labour should be saved. Any observer may see the process in operation.

So it is with everything, and so, I believe, it will remain, unless in the future some great change should come over our system of land-ownership. This of course has happened, or is happening in Ireland, with the result that there co-operation is beginning to flourish.

Moreover, it is not only among large farmers that this tendency, or negation of tendency, is to be observed. It goes down, at any rate in some instances, to the smallest small-holders. I will instance a case taken from that melancholy document "The Report on the Small-Holdings established by Mr. Joseph Fels at Mayland, Essex."

Mr. Thomas Smith, the supervisor, states in this report that in 1907 the tenants in residence formed themselves into a co-operative society, as their agreement provided that they should do. This society was ruled by the votes of the members. In 1908 "there arose dissensions amongst the members of the co-operative society"; the small-holders took the matter of the disposal of produce out of the hands of the

farm management, with the result that "tons of fruit became over ripe and had to be thrown away, or when sold, realised next to nothing. In addition large quantities were left hanging on the plants."

After this experience the farm management was unanimously requested again to take over the disposal of the produce. In 1909, after Mr. Fels had "once more come to the rescue," and, not for the first time, lent to each man enough money to see him through the season, and made him a present of a barge-load of 90 tons of the best manure, "it became noticeable that co-operation was not working satisfactorily. So far as the general arrangements for the handling and disposal of produce were concerned the system at work seemed almost perfect, but its effects on the characters of the men seemed the reverse. Some frequently showed discontent at the prices obtained, and were insistent that they could do much better for themselves if working alone, whilst almost all showed a lack of strenuous endeavour in matters for which the Society could be made responsible. Each seemed too ready to expect the Society to do for him things which he ought to have done for himself."

The end of it was that a meeting was called at which, "with three exceptions, the whole voted for individual working."

The rest of this depressing story can be read in Mr. Smith's report, but as it has nothing to do with the point under discussion I do not detail it here. Enough has been said, however, to show that co-operation was not exactly a success among the small-holders at Mayland.

Perhaps another example of the lack of any real co-operative enthusiasm, this time among East Anglian

farmers, may be of value. In the month of November 1910, a gentleman wrote to a local paper a very pithy account of his experiences as honorary secretary to a rat and sparrow club in Norfolk. I quote a couple of paragraphs, which tell of the end of the club.

"The following year (1910) . . . with a few exceptions the representatives in the parishes informed me they were unable to collect the subscriptions, and should decline to act in the future, and for a second time that task devolved on myself. After an immense amount of work and begging and praying I got within about £2, which is still owing to our president. . . . My experience is that farmers will not co-operate in the matter, and will not only withhold their support, but throw cold water on the scheme. Finding my efforts as district secretary were not appreciated by those for whose benefit I was working, I resigned my position as honorary secretary."

Poor honorary secretary! My heart goes out towards him.

One more very brief example. In my own immediate neighbourhood a co-operative society was formed a few years ago, in which some of us took shares. It was sickly from its birth, and after lingering for a while died of financial anæmia and lack of proper support. On the other hand, the Framlingham and District Agricultural Co-operative Society in Suffolk, which devotes itself to the collection and sale of eggs, appears to be doing well, thanks largely, as I am informed, to the beneficent exertions of Canon Abbay, its president. Also an attempt is being made to found a co-operative pig factory in Suffolk.



Now let us turn from these general figures and particular instances in Great Britain to those of Denmark, which for the most part I propose to quote from the Bulletin of the International Institute of Agriculture, as the statistics it publishes are the latest available. First, I will give a list of the co-operative societies existing in Denmark in 1909. These societies have for the most part arisen spontaneously in that country, and flourish without the assistance of the State. The State, I believe, only subsidises what are called the "control" societies and those for the improvement of live stock.

Here I may state that the object of these "control" societies, of which 519 exist in Denmark, is to keep an accurate account of the milking capacities of every cow belonging to their members. The first of them was founded in 1895. In 1907 the average milk return from the cows supervised by them in Denmark was 5756 lbs. Danish per head, while the average return from cows not supervised was 5120 lbs.

This gives an advantage of 636 lbs. of milk to the "control" cow, or, say, 23 lbs. of butter annually. In other words, the controlled cows produce nearly an eighth more than the uncontrolled. As I think I have mentioned, these societies send out skilled women who test all cows belonging to their members once a fortnight, and prescribe the exact kinds and proportions of food each is to receive. In 1909, 226,000 cows, or over 17 per cent. of the total number in Denmark were supervised by the "control" societies. To these and to the societies for the improvement of live stock the State granted a subsidy of over 1,000,000 kroner (£55,416).

*Danish Co-operative Societies in 1909*

	Number.	Number of Members.
Dairies . . . . .	1157	157,000
Bacon-curing societies . . . .	34	95,000
Societies for purchase of require- ments . . . . .	15	60 to 70,000
Societies for export of cattle . .	—	8,400
„ „ „ „ eggs . . . . .	—	52,000
„ „ horse-breeding . . . . .	270	21,500
„ „ cattle-breeding . . . . .	1260	31,300
„ „ pig-breeding . . . . .	253	6,430
„ „ sheep-breeding . . . . .	102	850
“Control” societies . . . . .	519	12,000

The first co-operative dairies were founded in 1882, and the first co-operative bacon factory began operations in 1887. In 1909 the milk of about 92 per cent. of the cows in Denmark went to dairies that were either co-operative or worked in common, but on this point I spare further statistics. I should add, however, that the result of the establishment of these dairies has been not only largely to increase the number of cows, but also the average annual milk yield from each cow. This, indeed, has risen from 2041 kilos per cow in 1898 to 2661 in 1908. Speaking generally, only a proportion of the large Danish farmers dispose of their milk otherwise than to the co-operative dairies.

Perhaps nothing throws a more striking light upon the beneficial results of these co-operative dairies than the following fact. In 1882 what was called “peasant butter” fetched 33 per cent. less than first-class butter made on the big farms, but in 1894 the co-operative butter, which, of course, for the most part came from the peasant farms, took more medals and prizes than

that from the great farms, and what used to be called second and third-class butter ceased to exist as a Danish commodity of commerce.

There is also an association called the Collective Purchase Society of the Danish Dairies, which enables those dairies belonging to it to buy everything they need in the way of machinery, &c., as cheaply as is consistent with good quality. This Society, which was formed in 1901, possesses a factory of its own. In 1909, 840 dairies belonged to the Society, and did business with it to a total value of over 1,000,000 kroner (or £55,416).

Further, there exist six societies which devote themselves to the exportation and sale of butter without the help of the middleman. Between 1900 and 1909 the business done by these societies rose from 23,000,000 kroner (or £1,274,583) to 32,000,000 kroner (or £1,773,333), a very heavy increase.

In 1909 the Danish co-operative dairies were valued at over 34,000,000 kroner, or about 28,000 kroner per dairy, while their debts in all added up to 17,000,000 kroner, that is 15,100 kroner per dairy. It would appear, therefore, that they have a margin of solvency amounting to about 50 per cent., which is a satisfactory position in any business.

Lastly, these dairies are managed by the votes of their members. In all but 6 per cent. of them, each member has an equal voice or vote without reference to the quantity of milk that he supplies. Thus a member who owns 10 cows is as influential as a member who owns, let us say, 100 cows.

## PIGS AND PIG FACTORIES

As every farmer knows, skim milk means pigs. Therefore the reader of this book will not be surprised to learn that the number of pigs in Denmark has increased enormously during what I may call the co-operative period. Thus in 1881 there were 527,400 pigs in the country, while in 1909, that is twenty-eight years later, the number of these animals was no less than 1,466,800, or in other words, two and three-quarter times as many as existed in 1881. These pigs were reared on 188,000 separate holdings. In addition to twenty private bacon factories which export bacon, and in 1905 slaughtered some half million of pigs, there were in Denmark in 1909, thirty-four co-operative bacon factories, some of which also deal with cattle. I append a table showing the rise in the number of factories between 1888 and 1909, and of the number of pigs and cattle killed therein :—

Year.	Number of Co-operative Bacon-factories and Slaughter-houses.	Number of Pigs Slaughtered.	Number of Cattle Slaughtered.
1888 . . . . .	1	23,400	—
1890 . . . . .	10	147,500	—
1895 . . . . .	17	528,800	—
1900 . . . . .	26	675,200	18,700
1905 . . . . .	32	1,031,600	27,000
1909 . . . . .	34	1,362,500	25,700

These factories vary very much in the number of pigs with which they deal. Thus ten of them kill from 10,000 to 20,000 a year, while only two kill more than 100,000. Most of the pigs are sent to them by members, only seven of the factories buying animals from outsiders.

In 1906, 92,000,000 kroner (£5,098,333) were paid by the co-operative bacon factories to the pig growers, of which sum a little under 10 per cent. was received by the growers in the form of dividend earned by the factories. Including this dividend, the average price per head paid for the pigs was 65 kroner (£3, 12s.). Thus the actual value of a slaughter pig in Denmark, of which, if I remember right, the average weight is about 135 lbs., would appear to be about £3, 1d. deducting the amount paid as dividend.

The thirty-four factories were valued, I think in 1909, at a little over 12,000,000 kroner, including everything, namely, fabric, machinery, stocked goods, &c. The charges on them, *per contra*, for mortgages and loans amounted to a little over 6,000,000 kroner, so that in this department of Danish co-operative effort the financial position is also sound, the liabilities being only half the sum of the assets. Some of the factories have very small debts and one has none at all. In the case of twenty-six factories the co-operating members are jointly and severally liable for the debts, and in most of the remainder a member is liable in proportion to the number of pigs which he supplies.

## SOCIETIES FOR PURCHASE AND SALE

Now we come to the third great branch of Danish co-operation, that of the Societies for Purchase and Sale. These societies buy feeding-stuffs and also seeds, chemical manures, &c. from abroad, and sell cattle, eggs, &c. (of those which deal with butter and bacon I have already written). The total amount of feeding-grains, bran, and other "offal," oil and other cake, seeds and artificial manures imported into Denmark in 1909 was of a money value of over 128,000,000 kroner (£7,093,333), a very large sum of money for so small a country.

In addition to what are known as Consumers' Societies, in 1909 fifteen co-operative societies were engaged in this business. Oddly enough in 1900 it was undertaken by the same number of societies, while in 1906 that number had increased to twenty, or five more than in 1909. The difference in their turnover between these dates is, however, very remarkable.

Thus in 1900 this amounted to only a little over 5,000,000 kroner (£277,083), whereas in 1909, the same number of societies being at work, the turnover came to over 31,000,000 kroner (£1,662,500). This large increase is partly due to the fact that as time went on some of the smaller societies were incorporated with those that were more popular or successful.

Of the Sale Societies, those for the export of eggs are the most important. Thus between 1891 and

1909 the value of these exported eggs had increased fourfold, namely, from about 7,000,000 kroner (£387,916) to about 25,000,000 kroner (£1,385,416), and the number of hens in the country from over 5,000,000 to over 11,000,000. About a third of this total exportation is conducted by the co-operative societies, but the remainder, so far as I can gather, is managed much on the same lines, since in such matters, as in others, these co-operative societies have a controlling influence on the market.

## LIVE STOCK IMPROVEMENT AND CONTROL SOCIETIES

THERE remain to be noticed the Live Stock Improvement and the Control Societies, which, it will be remembered, alone are subsidised by the State, so far as the former are concerned, under the law of 1887 and the subsequent laws of 1893 and 1902.

Here I will quote a table which shows the advance of these Live Stock Improvement Societies from and before 1890 to 1909, and also their total number in that year :—

Year of Establishment.	Number of Live Stock Improvement Societies.				
	Horse-breeding Societies.	Cattle-breeding Societies.	Pig-breeding Societies.	Sheep-breeding Societies.	Total.
Before 1890 . . . . .	21	66	3	—	90
1890-94. . . . .	33	98	2	—	133
1895-99 . . . . .	45	157	26	1	229
1900-04 . . . . .	59	385	87	36	567
1905-09 . . . . .	112	553	135	65	865
	270	1259	253	102	1884

I have already explained the object of the Control Societies, which is briefly :—

“To keep account by means of careful registration of the milk yield of each cow, of the amount of the butter-fat in the milk, and the relation between the



yield and the fodder consumed, with the object of eliminating useless or inferior cows."

The following table indicates the progress of these societies between the years 1900 and 1909, together with the totals of their members, of the cows supervised by them, and of the State contributions granted to them :—

Year.	Number of Societies.	Number of Members.	Number of Cows.	State Sub- ventions, Crown.
1900 . . . . .	180	3,880	76,100	31,500
1905 . . . . .	415	10,300	159,600	118,800
1909 . . . . .	519	12,000	206,800	120,000

I have already commented upon the great increase of milk yielded by these controlled cows as compared with that yielded by the uncontrolled cows, so on this point it will be unnecessary to trouble the reader with further figures.

## COMMENTS ON CO-OPERATION

As I think that I have now quoted such statistics as are necessary to enable the reader to understand the present position of co-operation in Denmark, it only remains for me to make a few general remarks upon that great subject.

First I would ask, Where would Danish agriculture be to-day if co-operation had not been introduced into that country ?

Some decades ago agricultural depression struck Denmark as it has struck Great Britain. Corn-growing ceased to pay, and Denmark being, like ourselves, practically a Free Trade country, at any rate in the case of the majority of food-stuffs such as meat, grain, and flour, it was not possible to stimulate the industry into an appearance of innate prosperity by the aid of Protection.

We met our trouble in the corn-growing districts by laying down a good deal of the land to indifferent pasture, by continuing to grow wheat at small gain or at a loss on the rest of it, and by demanding and obtaining reductions of rent from the owners of the soil. Or perhaps we gave up altogether, with the result that the unwonted spectacle was seen of English landlords farming their own acres because they could find no one to do it for them at any price.

But the Dane, being the owner of his land, had no squire to give him assistance. Either he must conquer his own difficulties or go under, which in an

agricultural State meant that his country must go under. So he took to co-operation and conquered them. Also he changed his methods, replacing his grain-growing, for which the country was never really suited, by the production of milk and the rearing of pigs.

Let us see what this co-operation means by help of a concrete instance. The small Danish farmer has an animal to sell, a fat beast or a hog. He sends it to his co-operative factory, and there, so far as he is concerned, is an end of the matter. Unless it is unhealthy or in some way not fit for sale, the factory receives it, kills it and credits the consignor with the value at the best market-price. In due course, as a co-owner of the place, he receives also his proportion of the profits earned by the animal, after making allowance for interest on the debt incurred in starting and working the co-operative institution and for other expenses.

Here in Britain the tale runs otherwise. First of all the farmer probably tries to dispose of his beast to a dealer or a butcher, whose object naturally is to pay him as little for it as he possibly can in order that he may make a good profit on its re-sale, living or dead.

A conflict of wits and interests follows. The vendor strives to conceal the shortcomings of his merchandise, the purchaser strives to exaggerate them. As the latter is skilled at the business which is his daily occupation, the probability is that in the end he has the best of the bargain, especially as in most instances the beast is sold not by weight but by guesswork. Often enough also the vendor finds out subsequently that he has been over-reached or outmanœuvred, a circumstance that does not engender confidence

in his fellow-man and may even breed distrust and bitterness.

Or let us suppose that either on this account of experience earned, or on general principles, the farmer prefers to send his animal to market to be disposed of by auction. If he is a small man this means that he must cart or drive it thither himself, probably a distance of some miles. If he is a large farmer perhaps he sends some one in charge of it, that is if he has any one about him in whose judgment, sobriety, and honesty he can confide.

In the one case his own time is wasted for the day, or the greater part of it, and often the work at home does not get on as well as it might do during his absence; in the other the wage of his man for that day must be added to the out-of-pocket expenses connected with the animal. If it is anything that must be carried, such as a fat pig, the cost of cartage must also be allowed for or defrayed.

Again, if the day be wet and the beast has to be driven, frequently enough it reaches the market in a condition that does not attract buyers. Or it may be necessary to send it by train, which is expensive.

Let it be allowed, however, *per contra*, that the Dane also has to deliver his animal at the factory, that is to drive or cart it to the gate, where he bids it farewell and returns home. There his expense and trouble end, whereas those of the English farmer only begin at the market-place. Thus auctioneers do not sell for nothing; I believe that their commission amounts to about sixpence in the pound on the price realised.<sup>1</sup>

<sup>1</sup> On a fat sow which I have just sold at a local auction mart for £8. 5s., I see by the bill that the commission amounts to 4s. 3d. The cost of carting it eight miles must also be deducted from the total realised.—H. R. H.

Further, he or his servant will generally require refreshment before returning home, for which he must pay.

Again, the market may prove overstocked or buyers may be lacking, in which case the unsold beast must again be brought to it in the following week. Or it may have suffered on the journey and fetch a much smaller sum than its real value, which the vendor makes up his mind to accept rather than take it home. Or possibly he may find that he is the victim of a "knock-out."

Who then is the better off? The Danish farmer with his co-operative factory, or the British farmer with his dealer, his butcher, or his market?

In the case of milk it is the same story. Either the producer must peddle it out locally, whole, or at considerable trouble in the form of butter, or he must send it by rail to a distributing firm of middlemen, who are naturally careful that they get a good share of such profits as may attach to its production and sale. Further, unless he makes butter, a most laborious and uncertain business when carried out on a small scale, the British producer does not get the advantage of the return of his skim and butter milk at a very low figure wherewith to feed his pigs or calves. On the other hand, notwithstanding these drawbacks, he realises a somewhat higher price for his milk, even after the payment of carriage.

Thus when the average price of Danish butter (what is called the "butter quotation") is 1s. per lb., I believe that the great Trifolium dairy which I have described pays its members about 6½d per gallon for fresh milk. Now personally I send milk to London to the value of about £1000 a year, for which I receive an average price of 1s. 5d. per barn gallon, that is for

two imperial gallons with an extra pint thrown in as a present to the distributor, which works out at a penny a pint, or 8d. per imperial gallon.

Out of this, however, I must pay carriage from Ditchingham to Liverpool Street Station, which amounts to 1d. the imperial gallon. But the milk sold to the Danish co-operative dairy is, as we saw at Brörup, collected by the factory carts, which are part of the equipment of the place. It would seem, therefore, that after all I only receive three halfpence, or, if carriage is allowed for, one halfpenny more per imperial gallon than is paid at Trifolium.

This matter of the comparative prices of milk in England and Denmark is so interesting and important, that in view of the assertions which I have seen made in various papers as to the very considerable advantage which the English farmer receives in this particular over his Danish confrère, I have thought it well to go rather more closely into these figures.

I find by reference to the foregoing pages that at the Brörup co-operative dairy in the autumn of 1910, 19 öre was being paid per two kilos of fresh milk. At Professor Maar's farm at Nordskov, 5 öre was received per lb. Danish. At Hilleröd, Mr. Sylvest Hansen, a small-holder, obtained the same price as Professor Maar, namely, 5 öre per lb. Danish. The Copenhagen Milk-supply Company pays 21 öre per two kilos, which is a little more than is paid at Brörup. In this case it should be remembered, however, that the milk is of special quality, and that a trifle, probably about 1 öre per kilo, must be deducted for carriage.

According to an agonising calculation which I have worked out, I hope correctly, the average of these various prices for kilos and Danish pounds equals

as nearly as possible 1s. 0½d. per barn gallon, including the extra pint which the producer must present to the distributor. The fact that the sum paid by the Trifolium dairy is stated to be 6½d. per imperial gallon (8 pints), which would amount to 1s. 1d. per barn gallon, an almost identical figure, encourages me to hope that my calculations *are* correct.

Therefore we may take it that roughly the Dane receives 1s. 0½d. per barn gallon as against my 1s. 3d. after the deduction of the cost of my carriage, which is 2d. per barn gallon. Or rather the actual receipts approximate somewhat more closely, since I must also pay carriage on the extra pint, which adds up to one barn gallon in every sixteen. I make a present of this to the distributor, but the railway company does not make me a present of the carriage on the said pint. Further, some distributors at any rate, think it beneath them to include the odd pence in the cheques they send in discharge of bills for milk supplied. Yet, in the course of a year, these pence mount up. Consequently, when all is allowed for, if I may take my own experience as a sample of that of other farmers, it would seem that the price of milk supplied from Norfolk is only about a penny per imperial gallon more than that actually received for milk supplied in Denmark. Also I must cart my milk to the station. Also I receive no share of the profits of distribution as does the Danish farmer, who is part owner of the factory, and, as we have seen, is paid a dividend on its profits in proportion to the amount of milk that he supplies, which dividend averages about 9 per cent.

So after all there does not seem to be any great advantage to the English milk-producer if he sells in bulk to a distributing firm. If he can find a market

and sell retail, of course his prices are larger ; but then he must allow for his expenses, risk of dishonesty on the part of employés, and trouble. In many, if not in most cases, however, no such market is available, the local demand being insufficient.

It may be answered that he should distribute his own milk in the cities. I have a friend who does this in a large town by means of a shop, and after a long struggle makes it pay. But the difficulties that he went through first were very great, not only from competition but also because of the servants in rich houses who often insist upon receiving commissions, and if these are not forthcoming, will complain of the milk and be careful that their complaints are verified by its taste and appearance.

Moreover, only large producers can start a shop of their own. If the rest of us desire to distribute in the cities we must take a leaf from the Danish book and co-operate. But this, as a rule, we cannot or will not do.

Here it may be convenient to treat of the difference between the price paid in England to the producer and the price paid by the consumer in London. From September 29th to December 25th, under my contract I receive 1s. 8d. per barn gallon of 16 pints, or including the gratis pint, of 17 pints. From December 25th to March 25th I receive 1s. 7½d. From March 25th to June 24th I receive 1s. 1d., and from June 24th to September 29th I receive 1s. 3d. This averaged over the year brings my sale price to 1s. 5d., or deducting carriage, to a shade under 1s. 3d. net.

Now according to the price-list of a very large dairy in London which I have before me, new milk is



sold by it at 4d. per quart, which I believe is the ordinary figure charged in our towns, or at any rate in London. That is to say, the consumer pays 2s. 10d. for the 17 pints of milk, for which I, the producer, receive a little under 1s. 3d. Or in other words, a difference of considerably over 120 per cent. finds its way into certain intermediate pockets.

What net profit this represents to the British middlemen I cannot say.<sup>1</sup> This may be large or small, but I must remark that the Copenhagen Milk-supply Company can supply a litre of special milk (that is 1½ pints) for 2d., and still earn a handsome profit. At any rate it is clear that under any proper system of co-operation the balance of this 120 per cent., after deduction of the necessary cost of distribution, whatever that may be, and all other expenses, might and would find its way into the pocket of the producer.

And yet we British milk-farmers do not co-operate. Rather than work with our fellows and flourish, as I believe we well might do, we prefer to bear all the risk and cost of milk production, at best a harassing and uncertain business, and receive in return but a trifling profit.<sup>2</sup> In most other trades this would

<sup>1</sup> I see in Mr. Christopher Turnor's most interesting book, "Land Problems," which I have just read, the following statement: "In Denmark the work of distribution (of milk) is done for 30 per cent. of the original cost, and this includes the profits of the milk company as well" (p. 89). There is a considerable contrast between 30 per cent. and 120 per cent. or even 100 per cent. If Mr. Turnor is right, and Danish distributors can afford to sell at the former price, the difference in the charges is difficult to understand.—H. R. H., February 1911.

<sup>2</sup> "A serious problem which producers declare can be met only by a rise in the price of milk. A meeting of dairy farmers was held at Bristol recently with the object of securing higher wholesale prices, and the prevailing opinion was that unless this can be obtained many will have to relinquish the business."—*Agricultural article*, "The Times," Feb. 6, 1911.

be called unwise. But so it is, and so, apparently, it will remain.

Now let us pass to the indirect but equally tangible results of co-operation. First of these I should be inclined to put the development of mind and character among those by whom it is practised. The peasant or little farmer who is a member of one or more of these societies, who helps to build up their success and enjoys their benefits, acquires a new outlook. His moral horizon enlarges itself, the jealousies and suspicions which are in most countries so common among those who live by the land fall from him. Feeling that he has a voice in the direction of great affairs, he acquires an added value and a healthy importance in his own eyes. He knows also that in his degree and according to his output he is on an equal footing with the largest producer and proportionately is doing as well. There is no longer any fear that because he is a little man he will be browbeaten or forced to accept a worse price for what he has to sell than does his rich and powerful neighbour. The skilled minds which direct his business work as zealously for him as for that important neighbour.

Again, being relieved from all the worry and risk of marketing, and sure that whatever he buys from his society, be it seeds, or food-stuffs, or implements, is the best obtainable at the lowest rate compatible with good quality, he is free to devote himself altogether to the actual business of his life. Also in any doubt or difficulty he can rely on the expert advice of his Control Society ; all the science of the country is in fact at the disposal of the humblest worker of its acres.

Lastly, by means of its elimination of expense and by its large dealings, co-operation makes enterprises which are often enough unprofitable individually, very profitable collectively. Once more it exemplifies the truth of the Greek fable of the single stick and the faggot, or of the motto of the old South African Republic, "Union is Strength." The farmer who standing alone can be broken across the knee of tyranny, extortion, or competition, if bound up with a hundred others by the bond of common interest is able to mock them all. This advantage, too, remains to him : as co-operative societies guarantee the quality of their produce, his market is always sure.

In short, co-operation is the real solution of the difficulty so often experienced of making properly farmed but unprotected land pay a living profit and something over for rent or interest on loans invested in the purchase of the freehold, with a margin for sinking-fund or savings.

I repeat, however, my belief that this most beneficial system will only take real root in an agricultural community which owns and does not hire the land it works, and even then will only attain to complete success and prosperity if the people of that community are very hardworking, educated in the true sense, kindly, tolerant-natured, and intelligent.

All these qualities the inhabitants of Denmark possess to a remarkable degree.

## SMALL-HOLDING OWNERSHIP IN DENMARK

My attention was first turned to the agricultural affairs of Denmark, now a good many years ago, by a desire to investigate the small-holdings which I had heard were so numerous there, but by one cause and another I have always been prevented from undertaking any such investigation. During the year 1910, however, the small-holding question has come much to the fore in Great Britain. Thus Mr. Balfour, who at the moment of writing is the leader of the Opposition, has intimated that if the Unionist party is returned to power it will pass measures to enable farmers of land to buy freeholds with the aid of funds advanced directly or indirectly by the State.

What those measures are to be, what will be the limit of the funds available, whether they will apply to all farmers or only to those who are known as small-holders, I have been unable to discover. Indeed, at present they seem to me to partake rather of the nature of a pious aspiration than of that of a settled policy to be acted upon when the opportunity comes. Perhaps, too, the exigencies of party politics have had some influence in the matter, and, consciously or unconsciously, these prospective small-ownerships are intended as a counterblast to the tenancies under the County Councils created by the terms of the Act of 1908.<sup>1</sup>

<sup>1</sup> All this summary was written just before the General Election of December 1910. One result of this election will probably be a post-

Oddly enough, as I write, a cartoon issued by the National Union of Conservative Associations and published as a special supplement of the *Primrose League Gazette* has been put into my hand, which seems to endorse this suggestion. Above and under it are printed respectively "The Two Land Policies," "Which will you have?" The drawing itself represents, to the left, a comfortable-looking agriculturist with a smile on his face and a pipe in his mouth standing by an excellent wooden fence, and resting on the ground in front of him a large sack labelled "Profit from my own Land." To the right appears a thin and miserable creature with no pipe, no smile, tattered trousers, and boots through which his toes are showing, staggering past a wooden fence which is in the last stage of decadence, and bearing on his back a gigantic sack labelled "Perpetual Payments to Government."

The question to be discussed is whether this pictorial allegory does or does not actually represent the facts of the case. One thing is clear. When the Unionist Government returns to power, which probably it will do either at once or later on (I write just before the General Election), it will be called upon to fulfil its promises as to State-aided land-purchase. It was this knowledge that determined me to make an effort to visit Denmark, as I had so long hoped to do, and there find out the exact truth as to the working of the

ponement of the Unionist land policy, at any rate so far as the putting of it into force is concerned. Still it would be most interesting to a great number of persons if the leaders of the Opposition would explain in detail exactly what that policy is, and how they will carry it out when next they come to power. Do they, for instance, propose to adopt the provisions of Mr. Jesse Collings's Land Bill of 1910, only on a larger scale?—H. R. H.

law, which I knew existed in that country, whereby peasants are enabled to buy certain plots of land with the help of State-advanced money.

It seems to me that what is required at this juncture at home is a knowledge of the real facts of the case, so that those who study such questions may be able to do so, not from a party point of view but from that of their probable effects upon the welfare of our country. So I determined to discover those facts, and, as I hope the reader will admit, I have done so to the best of my ability.

Moreover, at some expense I have caused a translation to be made of the Danish Small-holding Law of 1909, as, after a diligent inquiry, it appears that no English version of this law is to be found in any of our public offices. That this should be so is strange. Also it might have been thought that the informal committee appointed by Mr. Balfour to investigate this question of the practicability of the State-aided purchase of lands by their tenants would above all things have desired to acquaint themselves with the provisions of the only Act of the sort that, to the best of my belief, exists in the world. I presume, however, that they read it in the Danish, or perhaps they also have procured a private translation.

I hope that all to whom this subject appeals, and especially those who realise its enormous importance, if they do not happen to know Danish, will study this law in English, and with that object I print it as an appendix (see Appendix B).

Before attempting some consideration of these small-holdings and putting forward the conclusions, be they right or wrong, to which I have come personally, I

wish to make a few general remarks upon the Danish land system. In the old days Denmark was divided into large estates, and the small-owner was, so to speak, nowhere. But more than a hundred years ago, in 1787 to be accurate, the matter was inquired into by a Royal Commission, as a result of which inquiry a plan was inaugurated of leasing farms to peasants. Subsequently sundry laws were enacted, all with the object of breaking up the feudal system and bringing the land of the country into the hands of the people. Thus in 1848 it was made illegal to continue to entail estates. Also Acts were passed, of which I believe the first dates from the sixteenth century, under which field may not be laid to field, or rather farm to farm. Further, the local law of inheritance seems to favour the division of lands on the death of their owner.

A Danish lawyer has kindly furnished me with a summary of the existing law of that country upon the matter of the devolution of real property. It seems that there an owner of land *may* by special testamentary disposition designate which of his children is to inherit his farm and live stock, and appoint the sum to be paid out in compensation to the co-heirs who are thus deprived of their share of the real property. This sum *may* be fixed by the testator at considerably less than the true value of the estate, but as by law it must be "a moderate and reasonable compensation," it cannot be fixed at nothing or at a trifling figure.

Special regulations exist, however, as to the willing of "Sædegaarde," that is "privileged manors" which in the year 1660 were in the possession of members of the nobility, and included "lease farms" to an extent of at least 200 tønne "hartkorn."

As I do not think I have mentioned it before, I will take this opportunity to explain that "hartkorn" is the Danish land-tax standard. In the richest parts of Denmark one tönde hartkorn equals from 7 to 10 tøndeland of ground. But on the heaths, in Jutland for instance, one tönde hartkorn may correspond to as much as 1000 tøndeland.

It is therefore clear that in the absence of a special will to the contrary, the Danish custom is that on the death of their owner lands must be divided among children subject to the rights of the widow, who is, I believe, the particular care of the Danish law. It will be observed, also, that even if such a special will is made and the land is appointed to one heir, that heir must reasonably compensate those who would have been his co-heirs in the absence of such a will, in proportion to the value of the real estate which he inherits.

In short it comes to this, in Denmark the provisions of our law are practically reversed. Here, in the absence of a will or of special dispositions to the contrary, the eldest son takes the real property without being called upon to compensate the other children in money. In Denmark such right of primogeniture does not seem to exist, save perhaps in the instance of certain ancient "privileged manors" called "Sæde-gaarde."

As a result of all this long-continued custom and legislation, over 90 per cent. of the Danish farmers now own the land they farm. Indeed I believe that but one-fifteenth of the agricultural population is to-day in the position of tenants. Therefore, broadly speaking, in Denmark to be an owner of land means to be a farmer of land, whereas in Great Britain to be a



farmer of land rarely implies ownership of that land. In Denmark the tenant has been practically eliminated, and whatever profits he used to make go into the pocket of the owner, namely himself, which to my mind is one of the factors that build up Danish agricultural prosperity.

The following table, published in 1907, will show how Danish properties were divided as to number and size. It will be observed that at that time—and since 1907 the proportion has varied little if at all—there were only 2392 properties that comprised more than 270 acres of land, of which the total acreage amounted to 1,539,273. As against this there were 247,691 properties varying from  $7\frac{1}{2}$  acres to 270 acres, and comprising 6,637,896 acres of land. I may add that in 1906, out of Denmark's population of 2,600,000, over 54 per cent. belonged to the agricultural classes.

Area.	Number.	Total Area. Acres.
$7\frac{1}{2}$ acres and under . . . . .	116,614	239,604
$7\frac{1}{2}$ to $11\frac{1}{2}$ acres . . . . .	16,988	159,832
$11\frac{1}{2}$ to $22\frac{1}{2}$ „ . . . . .	28,992	473,598
$22\frac{1}{2}$ to $33\frac{3}{4}$ „ . . . . .	17,723	496,962
$33\frac{3}{4}$ to $67\frac{1}{2}$ „ . . . . .	35,257	1,752,121
$67\frac{1}{2}$ to 135 „ . . . . .	25,615	2,346,295
135 to 270 „ . . . . .	6,502	1,169,484
270 to 540 „ . . . . .	1,570	574,946
540 acres and over . . . . .	822	964,327

To return to the subject of the State small-holdings. The reader of these pages will have noticed that such holdings are the object of hostile criticism from many of the larger landowners in Denmark. Indeed, what may be called the Conservative party there seems to disapprove of them on principle, as is the case in other countries. Thus I have before me

the translation of an article published on 4th November 1910 in the Danish *Jyllandsposten*, a high-class Conservative journal, headed "The Loans from the State—Cheap Money and its Abuse." This article is in substance a severe attack upon the whole policy that has resulted in the institution of these holdings. Says the *Jyllandsposten*:—

"For many years we have witnessed an eager race for the housemen's votes. The programme of the parties made the housemen their pets, and instituted a violent agitation in order to satisfy that part of the population."

Indeed, the drift of this criticism, which I reprint at length in an appendix, as it is well worth study (see Appendix D), is that the creation of the Danish State small-holdings is little more than a corrupt political move badly carried out.

We have heard the same arguments in this country, not from one side, but from both. When the Radicals passed the Small-holdings Act of 1908 it was so denounced. When the Conservatives propose another Small-holdings Act that would substitute freehold for leasehold it is so denounced. Doubtless there is a spice of truth in these accusations, since all statesmen are greedy for the votes which place them in power, and it is to be feared that not very much is done in this world solely because it is right and good—that is by political parties.

Still, when all deductions are made, it must be acknowledged that the conscience of this nation, as of others, is stirring as to the matter of its land and the uses to which it can best be put; and notwithstanding the criticism of the *Jyllandsposten*, the same may be said, perhaps with greater force, of Denmark. Some

desire to do what should be done is mingled with that of seeking political advantage.

But, putting all such advantage aside, for reasons too long to be entered into here, the small-holder has a critic in the large farmer, who despises his petty agriculture, not unnaturally fears his compulsory encroachment upon his acres, and at heart resents his claims to independence, and even to some kind of equality. Also, though there are many exceptions, the landowners, or at any rate the land-agents, as a class have no love for him, since he is troublesome in many ways, and above all he interferes with sport. Small-holders keep no partridges, poach pheasants, and make shrill complaints if foxes steal their hens or those who hunt them gallop across their crops and smash their fences.

The State small-holding business, said the Kammerherre Tesdorpf in his outspoken fashion, is "all nonsense." As shooting and hunting are not very common in Denmark, except upon the wastes, doubtless he was looking at the matter from an agricultural point of view. It is not wonderful that the owner of one of the great farms of Europe, with its highly tilled fields measuring, each of them, 180 acres in extent, and its splendid herd of 1100 cows, should think little of the small man with his handful of cattle and pigs and his strip of unenclosed soil bought by the aid of a Government loan.

Yet I venture to suggest to him and to all those who hold these views in secret—for few are courageous or honest enough to express them openly like Mr. Tesdorpf—that they do not dive deeply enough into this question. They do not remember that the exact amount of property held by a man is a mere matter

of degree, that it is the man who is important to himself and to the State, and that, after all, given general education such as exists in Denmark, and the same animating principles, there is no great gulf fixed between men bred upon the land and subjected to its influences. The peasant who cultivates his ten acres, or his child who starts with a sound mind in a sound body, may become anything. Thus the present Minister for Agriculture in Denmark was a peasant.

Moreover, here the State and its needs are concerned. What all countries now require are not more town-dwellers, but more land-bred folk. They require them for defence; they require them for purposes of national health; they require them for steadfastness in the midst of the shifting developments of a neurotic age. Without an adequate supply of land-dwellers to replenish and support their city populations, peoples must deteriorate and in due course fall.

I will go further, and repeat what I have said before in other books—for it is one of the great objects of my life to advance this truth for the consideration of my fellow-countrymen—that the retention of the people on the land should be the great, and even the main, endeavour of the Western nations. Nothing can make up for the loss of them—no wealth, no splendour, no “foreign investments,” no temporary success or glories of any kind. At any sacrifice, at any cost, all wise statesmen should labour to attain this end. The flocking of the land-born to the cities is the writing on the wall of our civilisations. This I have seen clearly for many years, and if I needed further evidence of its truth, I found it in plenty during my recent researches into the social work of the Salvation Army, which brought me into con-

tact with thousands of waste mankind — the human refuse of the towns.

Speaking generally, in the villages such folk scarcely exist. But in the cities, whither so many flock in faith and hope, they are manufactured by the hundred. For most of these the competition is too fierce. They are incompetent to cope with the difficulties of what is called high civilisation. At the first touch of misfortune, of temptation, of sickness, they go down, and but too often fall, like Lucifer, to rise no more. The shelters, the jails, the hospitals, the work-houses, the Poor Law returns, all tell the same story. Moreover, what class of people are bred in the slums of Glasgow or of London? Yes, in Glasgow, where I was informed not long ago that one out of every twelve of the inhabitants has no home, but sleeps at night in some refuge or common lodging-house.

In Denmark they understand these evils, and do their best to remedy them ; nor do they strive in vain, for whereas in 1880 it numbered a rural population of 1,417,071, in 1901 that rural population had risen to 1,512,975. Moreover, the oversea emigration has decreased largely—from 8516 in 1906 to 4558 in 1908, which are the latest figures available. I forget what the statistics for Great Britain as to the rural population and emigration are for the corresponding periods, but I should be surprised if they do not show very different proportional results.

It may be argued that our country folk stop on the land, if not as small-holders, of whom there are comparatively few in England, then as agricultural labourers. But this is just what they do not do ; it would be scarcely too much to say that most of the young men and women try their best to escape from

the villages to the cities, or failing these to America or elsewhere. Quite a few of them remain where they were bred if by any means they can depart.

Why should they? The life of an agricultural labourer is not particularly attractive except as a means to an end, and for most of them that end is exceedingly remote. Here and there a man who has saved a little money may be set up in a holding under the County Council (in my own neighbourhood I do not know of one), but nine out of ten labourers, as distinguished from small, retired tradesfolk, &c., are doomed to end their lives exactly where they began. Indeed their best days of manhood are their earliest, for as time goes on and their strength lessens, so must their wages. Moreover, comparatively few of them would take up a small-holding on average land, even if it were offered to them. Why? Because they fear that they could not make it pay, and they are right.

Except in picked situations or where there are sundry advantages that I have no space to detail, if their occupiers do no outside work and lack private means, small-holdings on ordinary land will not pay in England, unless and until a really far-reaching system of co-operation, such as prevails in Denmark, shall be established in this country. If only politicians and others would bear that fact in mind it would save much disappointment and disillusion. I will go further and add, for reasons I have given already, that I do not believe this vital co-operation will ever be established in Great Britain until the land is in many more hands than hold it at present. The tenant is not a co-operator. When did the Irish peasants begin to co-operate? Was it not after they had bought their

holdings or found themselves with a good prospect of buying them?

Now in Denmark all these things are different. There the rural labourer has, at any rate in many instances, a future before him. He hopes not to remain in that condition throughout his life. He looks forward to the time when, in his middle-age, he and his family will work a holding of their own, either with or without the assistance of the State; when they will be independent; when "their feet will be under their own table." It may seem a small ambition, but I say that it is a good one, and that the Government which makes it possible of accomplishment is doing a noble work, of which in due time their country will reap the benefit. But the Dane knows that when he attains to his small-holding he has a fair prospect of being able to make it pay by the aid of co-operation. As I learned in Denmark once and for all, that is the root of the matter—Co-operation, and again Co-operation!

I commend these views to the consideration of the writer in the *Jyllandsposten* and of those large landowners in Denmark and elsewhere who hold that small-holdings are "all nonsense." But I am not vain enough to suppose even for a moment that they will be convinced thereby, for who is ever convinced against his will? Yet I do believe that the course of events will prove their cogency, though probably this will happen after I have ceased to speak or write, by which means alone I, a humble individual without voice in the councils of the nation, have it in my power to advance them. Perhaps, too, this proof will manifest itself at last in some signal and painful fashion.

To return. As these pages show, there is, how-

ever, a large body of opinion in Denmark which looks on the State small-holdings with favour and even with enthusiasm ; which does not believe them to be a mere political "dodge" ; which is convinced that they are doing great good in the land. There is no need to recapitulate in this summary views that have already been expressed by many witnesses. Still I will ask the reader to listen to another judgment, that of Mr. Niels Pedersen-Nyskov, a member of the Danish Parliament and himself a farmer, who, as I was told on all hands both by Government officials and others, is one of the first and most respected authorities on this subject.

In a long letter which he has been so good as to write to me, after setting out the provisions of the law that the reader can study for himself, Mr. Pedersen-Nyskov says:—

"I have worked on this problem for ten years, and I am sure that few abuses have arisen under the law. Indeed, when the Commission (of Management) is carefully directed they cannot easily arise. In the previous laws (those of 1899 and 1904) there was a provision that the small-holders' properties could not be burdened with other debts in addition to that to the State. This provision has been deleted from the last law (that of 1909) as it was open to abuse and of no practical value, for the simple reason that further mortgages can hardly be placed when the State has already advanced the small-holder nine-tenths of the value of his property, inclusive of that of stock and implements.

"The law, as I know from experience, has apparently resulted in a very considerable improvement in the condition of the land-workers. Their progress



during the last ten years has been very great. The soil, which when taken over was often in bad condition, has been well cultivated, the value of the stock (on their holdings) has been more than doubled, and the buildings have been improved and where necessary enlarged. Only an able body of housemen (*i.e.* small-holders) could have attained to this result, but a great deal has been done to improve this class. The State contributes to their education at the Housemen and other schools, and the Housemen Unions, which are supported by the State, also do good work by means of the general education of their members. These housemen also receive grants to enable them to travel for the purposes of study. The land owned by the housemen is as a rule the best cultivated and gives the best results. The cattle and the pigs on these little holdings also return a proportionately larger profit. The good results of the establishment of these independent housemen holdings will grow clearer year by year, and the sums now laid out in the form of old-age pensions and other contributions to the poor will correspondingly decrease. Also the housemen will become more prosperous, able to buy more goods and to pay more in direct and indirect taxes. This system of small-holdings also keeps people on the land who otherwise would emigrate. Not the least advantage of the scheme is that a healthier and a better generation will spring from the small-holders than sprang from the landless labourers.”<sup>1</sup>

Surely this is very strong testimony to the benefits

<sup>1</sup> For the further views of Mr. Pedersen-Nyskov on this matter, which reached me too late to allow of my commenting on them, see Appendix D.—H. R. H.

that have ensued from the establishment of the State small-holders in Denmark under the laws of 1899, 1904, and 1909.

Passing on from the general question, I come to that of the particular objections advanced against these laws by those who in the main approve of their principles. Of these I think there are but two, namely (1) that the small-holdings should be leasehold and not freehold, and (2) that the proportion of capital required to be provided by the small-holder should be increased.

It will be remembered that Mr. Waage, perhaps the greatest authority on the subject in Denmark, and the gentleman whose official duty it was to draft the last two of the three Acts, expressed himself to me as being strongly in favour of the substitution of long or even of perpetual leaseholds for the existing system of freehold. Also there are many others who share his views upon this point.

The advocates of the freehold plan allege, however, that the real reason of this advocacy is political; that what Mr. Waage and his friends desire is to introduce the thin end of the wedge of land-nationalisation by vesting the real ownership of a great block of property in the State, and the leasing out of this property to such tenants as it may approve.

In fact their arguments are very similar to those which we hear in England on the matter of the tenancies held under the County Councils. These, it is freely stated, have been brought into being by the Liberal party with a like object; also for the reason that a tenant, who is generally a person with something to gain and therefore to agitate for, may as a rule be relied on to vote Radical, while a free-

holder, who has got all there is to have and desires to keep it, will in nine cases out of ten vote Conservative.

This is a matter which it does not come within my province to argue in the present book, that is as absolutely non-political as anything can be. Therefore I will only say that as most men are influenced, consciously or unconsciously, by their strong convictions and desire, also consciously or unconsciously, to advance a state of affairs in which those convictions will triumph, in both cases there is probably a modicum of truth in the criticism. Still more probably it is not all the truth. At any rate for my own part I am content to believe that each school of thought advocates what it holds to be best, without reference to its political opinions or to its individual advantages. If this is not so, then indeed we may begin to despair of the republic.

When, however, we come to consider the views of Mr. Waage and his friends upon their merits, I must confess that personally I do not find anything in them that carries conviction to my mind, at least so far as Denmark is concerned. As I have already shown, it is difficult to see that the position of a State tenant would have any great advantages over that of a State freeholder. The latter has roughly about a hundred years in which to discharge his debt to the Government, and I do not suppose that his annual repayments on account of purchase price, &c., amount to much more than would his annual rent as a tenant. Of course the difference is that at the end of a hundred years he, or rather his remote descendants, will own an unencumbered property, whereas if he is a perpetual leaseholder they, at that date, will not have bettered their position, but will be called upon to

continue to pay rent till the advent of the Day of Judgment or of the Chinese invasion. Still, for practical purposes in a world that is very much on the move, does it greatly matter what happens a hundred years hence? I think not.

A more valid argument, to my mind, is that in a country where no system of compulsory purchase exists, the continual buying of properties by the aid of State-advanced money unduly increases the market value of land. Here again, however, we come face to face with a difficulty which requires explanation. If the State leases out the land it must still get it somehow, presumably by purchase, and therefore its purchases would raise the price of the commodity as much as do those of the small-holders, which are carried out by the aid of the funds it loans to them.

Even if the suggestion which I think was advanced either by the Danish Minister of Agriculture, or by Mr. Waage, in conversation with me, were put in practice, namely, that the glebe-lands should be used for this purpose, these would still have to be bought at a fair price. Moreover, if the number of applicants for small-holdings continued to increase or even to be considerable, the glebes could not, I presume, go very far towards satisfying their needs. Therefore, as the perpetual tenant would still be required to find some money to furnish himself with working capital, so far as I can see the thing is as broad as it is long.

Also it must be remembered, as Mr. Schou pointed out so forcibly, that if little or no extra expenditure is involved, and if the obligations remain practically the same, it is in the very nature of man to prefer to possess rather than to hire for however long a period. Most of us like to have something which we can call

our own, especially if that something is a bit of our mother earth.

On the subject of the proportion of capital that should be put up by the State small-holder himself, among all those with whom I spoke on the matter in Denmark, from Mr. Waage down, there seemed to be but one opinion. Individually and collectively they declared that it ought to be raised from the present tenth to a fifth or a third. It will be noted, however, that in the article in the *Jyllandsposten* to which I have referred (see Appendix D), it is stated that "the Government proposed that the agricultural worker should possess one-fifth of the value of the property, but the Folkething, or Parliament, would have the amount reduced to a tenth, and won!"

This would seem to show, although I did not come in contact with it, that there exists a body of opinion in Denmark which approves of the proportion that is demanded at present. If so, I cannot agree with this view. Like Mr. Waage and the others with whom I discussed the question, I hold strongly that one-tenth of the purchase price is far too small a proportion to be demanded from the small-holder. Personally I consider that he should be able to show that he is in possession of not less than one-third, and I earnestly hope that if ever this Danish system, or anything like it, should be adopted in Great Britain, the Government will insist upon this condition. If it does not it will, I believe, imperil the success of its scheme, and expose the State to the risk if not to the certainty of loss. Nine-tenths of a man's property should not consist of debt if he wishes to make a success of the business upon which he is engaged.

Let us suppose whenever the Unionist party

comes to power and proceeds to fulfil its promises as to granting State aid to tenants or others who wish to purchase land, that it accepts this view as sound and lays it down as a provision that the intending purchaser must show himself to be in *bona fide* possession of, say, one-third of the agreed value of the estate. Then I admit, notwithstanding my own strong predilections in favour of freehold, that it does become worthy of serious consideration whether some alternative plan of long or perpetual leasehold would not be preferable, at any rate where the little man is concerned. For this reason. As a general rule, except where the soil is very good and it is proposed to put it to the purpose of intensive culture or market-gardening, even with the help of co-operation it can scarcely be expected that the peasant farmer will make a decent living and pay up the instalments of his debt punctually on a less area than 20 acres, at any rate in most parts of England. It may be remembered in this connection that even in Denmark some authorities whom I consulted thought that the State small-holder should be supplied with not less than 10 tøndeland, that is about 13 acres, as on most soils any smaller area would scarcely suffice for the earning of a livelihood.

Let us say that the cost of such a twenty-acre holding in England is £20 the acre, or £400, to which, as these will not often be ready to hand, must be added that of a house and the necessary buildings, with well, fencing, and drainage, at an outlay of not less than £300. Further, the expense of stocking the holding with live and dead stock and the enclosing of the same must be allowed for at £8 the acre, the very *least* sum in my opinion at which it

should be put, or £160 in all. This brings up the total expense to £860, or with extras for legal expenses, &c., to £900.

Of this amount, under the Danish system, the houseman or little farmer would only be called upon to put down one-tenth in cash, namely £90. But if it is agreed that it is desirable that such a person should possess not less than one-third of the capital, the English small-holder who was buying by State aid would be called upon to produce £300, which he could seldom borrow, as everything that he had down to his hens would be mortgaged to the State. Now, how many intending small-holders in England will be able to count down these three hundred sovereigns, without which the purchase could not be effected? I imagine not a large proportion, since £300 takes some saving out of a labourer's wages.

Therefore it would appear that this attractive freehold system must often be impracticable, in which case the alternative of long leasehold might prove the better course. At 4 per cent. on the cost of the land and buildings—and the Government could scarcely ask less—the rent payable would then be £28 per annum, or probably about the same as the amount required to enable the freeholder to purchase the property on the Danish system over a term of nearly a century of time. But the difficulty of stocking, which would cost £160, still remains, the difference in favour of the small-holder being £140, the balance of the £300 which he would be required to find if he bought the freehold. As a leaseholder, however, although the proceeding is not to be advocated, he could probably borrow a portion of this £140, if he did not chance to possess that sum, upon

the security of his stock, especially if credit or land banks were instituted in this country.

It must be borne in mind that under the recent Small-holdings Act the small-holder has the opportunity of buying, but that it is one of which so far he very seldom avails himself. This would appear to suggest that the difficulty of extra capital is to his mind insuperable.

The Small-holdings and Allotments Act of 1908 provides (Section 11) that on the completion of the purchase from a County Council the buyer "shall pay not less than one-fifth of the purchase price." Also it provides that "not more than one-fourth of the purchase money may . . . be secured by perpetual rent charge," and that the residue "shall either be repaid by half-yearly instalments of principal with such interest and within such term not exceeding fifty years from the date of sale, as may be agreed on with the Council, or shall, if the purchaser so requires, be repaid with such interest and within such term as aforesaid by a terminable annuity payable by equal half-yearly instalments."

Lastly, the Council may, if they think fit, agree to postpone for five years the time for payment of an instalment either of principal or interest or of a terminable annuity, if the purchaser has done anything to increase the value of the holding. The Act adds, however, that such concessions must be of a kind to "prevent them from incurring any loss." Further, if any of the conditions are broken the Council may "cause the holding to be sold."

These terms, if they are looked into, seem liberal. Yet few small-holders come forward to avail themselves of them in England. Practically they all



prefer to take leases rather than to buy the freehold. Thus in Norfolk up to December 14, 1910, applications to the number of 2076 had been received by the County Council, and 530 persons had been settled on the land. Among all of these not a single small-holder had expressed a desire to purchase his holding.

As this is so, does it not appear that the new plan suggested to the country is in reality "dead and damned" before it is born? If intending small-holders will not buy under the existing opportunity which is offered to them, which seems to be the most liberal that can be offered without loss to the County Councils, why should they avail themselves of any future opportunity whereof, if the State is to protect itself, the conditions can scarcely be made more generous?

For my part I can find no satisfactory answer to the question. The small-holder has said that he prefers leasehold, and there is an end. Indeed, only one other explanation appears to be possible, namely, that the matter has not been properly explained to applicants for land; that these do not clearly understand that they can become freeholders by providing one-fifth of the purchase price out of their own resources. I am assured, however, by the Chairman of the Small-holdings Committee of the Norfolk County Council that this is not the case.

These remarks, of course, do not apply to the question of the purchase of farms by their tenants with the aid of State-advanced moneys. The farmer and the small-holder are in different positions, and the former may, and as I believe often will be willing to take risks and provide funds that the latter does not feel himself able to face or find.

To sum up—it would appear in the light of these

facts that the new policy submitted to the country has but a small prospect of success, except where farmers are concerned, as differentiated from small-holders.

The truth is, as the Danes are finding, that this question presents a knot of problems hard to unravel. My own suggestion, for what it is worth, would be that by some necessary enlargements and modifications of the existing Small-holdings Act of 1908, both systems, namely that of freehold and that of leasehold, should be tried concurrently, the applicant being in the future, as he is now, given his choice between them. The farmer, if he wishes, can then avail himself of the former, and the small-holder of the latter alternative.

It must not be forgotten, however, that there is this difference between the circumstances of the two countries. In Denmark no compulsory powers of purchase exist, whereas in England they do exist. Therefore the Danish trouble, so often insisted on to me, of the running up of the price of land by the eager demand for small-holdings to be purchased with the aid of State money, would scarcely become dangerous here, at any rate at first. I say at first, because in the end, if the process of such purchases went far enough, economic laws would certainly assert themselves. In spite of compulsion the price of land would rise, and no honest Government could pay an owner a smaller sum for the acres which it seized, than those acres would fetch in the open market. If it did so it would be a robber wearing the mask of benevolence. No one has a right to beggar Peter for the convenience or the advancement of Paul.

It will be noted that these remarks deal in the main with the problem of the establishment of small-holders on freeholds. They only touch on the larger

issue alluded to above, to which I understand the Unionist party is also pledged, that of the provision of funds by the aid of which the tenant farmer, large or small, is to be helped to buy his farm by mutual agreement with its owner. This excellent project (I wonder if I shall live long enough to see it become anything more) will involve the finding of tens or scores of millions of pounds, and is one altogether too large to be discussed in these pages at the length which it deserves. Still we may be permitted to wonder whence the money is to come?

Mr. Jesse Collings, with whom I have recently had some most interesting correspondence on this and kindred subjects, offers his own solution of the problem in his "Purchase of Land Bill" of 1910. Under the provisions of this Bill the landlord and the tenant of any holding in England or Wales may agree together for the sale of the holding to the tenant "at such price as may be fixed between them," and thereafter apply to the Board of Agriculture to advance a sum not exceeding £7000, or in special circumstances £9000, to enable the purchase to be completed. This advance is to be repaid by means of a purchase annuity calculated at the rate of £3, 5s. per cent.

In the same way where smaller holdings are concerned the Board of Agriculture, if satisfied with the security, may advance to the purchasers "any portion not exceeding nine-tenths, or if they think fit up to the whole of the purchase price." For the purposes of the larger properties a sum not exceeding £10,000,000 is to be advanced by the Treasury out of the Consolidated Fund, and for those of the smaller holdings a sum not exceeding £2,000,000.

Here I may remark that if any such purchase

scheme came into operation on a large scale, these sums would prove to be but a very small proportion of the amount of money required. £10,000,000 would not go far in such a case in a great country like England and Wales. Also  $3\frac{1}{4}$  per cent. at the present value of money seems to be a low rate at which to calculate the purchase annuity whereby the Treasury must be repaid.

It is true, as Mr. Jesse Collings points out to me, that in the case of the Irish Act the purchasing tenant is not required to pay down anything, the whole of the purchase money being advanced. But, as he also points out, "the mistake in the Irish Act is that the interest is too low," and the  $2\frac{3}{4}$  guaranteed stock raised to provide the fund has in consequence sunk to about 80. Indeed, were it not for the £12,000,000 voted by Parliament as a kind of bonus the plan would not work at all, especially as the Irish tenant is only required to pay ten shillings, or one-half per cent. annually, as a sinking-fund to liquidate the principal of the debt.

Of course the truth is that this Irish land-purchase can scarcely be looked upon as a purely business transaction, and therefore is almost useless as a model or an argument. It must be considered in the light of a boon wrung from the British Treasury by the masters of seventy or eighty votes in Parliament. When our home agriculture can command the same number of votes it may expect similar advantages, but probably not before.

Irish land-reformers, in short, have been and are in a position to back their appeals by a plentiful use of the Parliamentary shillalah. English land-reformers and agriculturists are but strengthless

beggars who, because of their lack of combination and, indeed, of their internecine divisions, can neither frighten our rulers into concessions nor buy them by the promise of active support. Therefore they must be content with the cold shoulder, or, if they persist, with the contemptuous treatment that beggars know.

I put to Mr. Collings the point that in such transactions the State should be guarded against loss. He answered me thus: "I do not think that this can be treated as a purely economic question, for the reason that the reform contemplated, in my opinion, involves the solution of social difficulties, and is necessary for the security and prosperity of the nation. Under the proposals made I do not think there would be any risks to the State, but if there were they should be accepted. The reform is as necessary to State welfare and defence as the building of Dreadnoughts."

Coming from such a source this is a view that is entitled to all sympathy and respect. Whether it will command the attention of the British Treasury is another matter. Can practical men hope that the Irish land-purchase regulations, or anything nearly so liberal, will ever be applied to England, at any rate in our day? Or will the Treasury ever consent to advance *all* the purchase price to British—as distinguished from Irish—tenants who wish to become owners of their holdings, on the ground that a national benefit may result?

I fear that to seek these great advantages is but to cry for the moon. Also, would such a bargain be one of which we could ask a State, largely composed of town-dwellers, to bear the burden?

For my part I think it would be wiser, amongst other possible expedients, to concentrate upon a

demand for a really wide measure of land purchase, under which the buyer would be required to find one-third of the agreed cost of the property. Still I wish to make it absolutely clear that in the main I am an earnest supporter of Mr. Collings's scheme. The only difference between us is that I hold that the purchaser should provide one-third of the cost price as a guarantee of *bona fides*, to safeguard the State against mere speculation with its funds, and to allow for any possible depreciation in the value of the property. This, however, is but a matter of personal opinion. It may well be that Mr. Collings is quite right in his view, and that I am quite wrong in mine, although this seems to be supported by the Danish experience.

If by a lucky chance some such system of land purchase on a large scale by tenants should be introduced at any time by a British Government, it would be well worth considering whether it could not be helped forward by the establishment of Credit Unions on the Danish plan. But alas! such Credit Unions again involve co-operation amongst those who are to receive their benefits.

The only point that remains to be discussed in connection with the Danish State small-holdings is whether these are or are not a success, and therefore a model worthy of imitation in this country. This is, in fact, a question upon which those who may care to read this book with attention will be as competent to express an opinion as I am myself, since the evidence on which such a judgment must be formed is before them. To the best of my power both sides of the argument have been set down fully and fairly in the foregoing pages.

For my part, speaking generally, I do consider

them successful, and that they would be still more so were the proportion of capital to be provided by the small-holder raised to one-third, or at any rate to one-fifth. In short, to take two examples only, I endorse the views of Mr. Schou and of Mr. Niels Pedersen-Nyskov, which have already been quoted.

Still this does not mean that every Danish small-holder succeeds. As to the proportion of success or failure, indeed I believe that Mr. Ole Larsen, himself one of them, spoke the exact, or at any rate the approximate truth. He said that about half of them succeeded, about one-third just lived, while the rest failed; adding that everything depended upon the individual.

If, as I think, this basis may be accepted as correct, it cannot be held that the Danish Government was mistaken in establishing these small-holders in view of the benefits which the multiplication of such a class must confer upon any country. On the contrary, the effort was good, and will prove fruitful of good. Therefore it would seem that Great Britain would be wise to follow the example on a large scale, provided that such holdings can be made to pay. But without Housemen's Credit Unions, schools, and Co-operation, can they be made to pay in bulk? At present the circumstances of the two countries are quite different, and there is therefore a fear that even if the State advances the money, what only just succeeds in Denmark, which is already a community of co-operating small-holders, may in England prove little short of a fiasco.

Indeed, as I have shown, here the small-holder either has no will or no funds to buy. At present he prefers to remain a tenant. Therefore it would appear that the movement can be best developed on the lines of tenancy, at any rate until the conditions change.

## THE STATE IN ITS RELATION TO AGRICULTURE IN DENMARK

THE prosperity of Danish agriculture is undoubtedly much assisted, both directly and indirectly, by the constant care of the State. Denmark is a small country which, except for one overpowering fear, is not greatly troubled by many of the external problems that afflict other nations. Therefore it can concentrate its attention upon its own internal affairs, whereof the greatest and most important is the land, on the produce of which it lives. In Denmark questions connected with the land are vital, and considered upon a steadfast plan and with a care that they do not receive in England. Thus I think I am right in saying that during the final sessions of the Parliament which died in 1906, in which the Unionists had a great majority, only a few hours of time in all were devoted to matters connected with agriculture, while no Bill that had to deal with rural affairs was even considered, although there were several before the country.

It is true, however, that during the last four years things have improved in this respect. Sundry Bills dealing with agricultural interests have been before Parliament, and amongst those passed, one, the Development Act, is of great importance.

But in Denmark all matters that have to do with the land receive a constant and not a spasmodic



attention. Nor are any of them held to be too small to occupy the time of Parliament.

### THE DANISH RAT ACT

Let me take a single, and perhaps rather a humble, instance of this statement. For years farmers and others have complained of the depredations caused by vermin in this country, especially by rats, which result in a loss estimated by experts to amount to many millions of pounds a year. While our Governments have considered such a matter to be beneath their notice, that of Denmark has dealt with it effectively, with the result that rats there grow comparatively scarce.<sup>1</sup>

In England, on the contrary, these, like the sparrows, have increased till they are becoming a national menace. Indeed, during the autumn and winter of 1910 East Anglian farmers and traders have suffered, and are still suffering, great loss owing to the discovery of the existence of plague among these rodents, which has communicated itself to various other animals and caused the death of several human beings. As a consequence, at the time of writing, certain sorts of produce from the affected districts have become practically unsaleable.

In the presence of what may become a terrible public danger, the Local Government Board has issued sundry orders, and the district authorities have been urged to action. The war against this enemy

<sup>1</sup> From a letter which I have just received from him it seems that to Mr. E. Zuschlag, the President of the *Association Internationale pour la Destruction Ratiennale des Rats*, is due the credit of this Danish law. He says, "It is my result of many years of unceasing labour."—H. R. H., March 1911.

is, however, likely to prove too local and unconcentrated to produce any great and permanent result, especially as I read in the papers that many members of the district councils denounce it in the same words that some use about the Danish small-holdings, as "all nonsense."

To be effective the campaign must be national, and this it will never become until the matter is taken up seriously by Government. In the hope that whichever party is in power in the next Parliament will think the recent enormous increase of rats and sparrows should be dealt with without further delay, I print as an appendix an English translation of the Danish Bill of 1907, which, with a few alterations, has, as I am informed, just been extended until 1915, also the accompanying circular addressed to the local authorities (see Appendix C). If any legislation is proposed in Great Britain having for its object the keeping down of rats, these documents may perhaps prove useful.

Such legislation, in my view, is urgently needed, although personally I am of opinion that if not preceded it should be accompanied by a full investigation by Royal Commission covering the entire ground of the damage done to agriculture and otherwise by such pests as rats, sparrows, house-flies, migratory wood-pigeons, &c., and of the best methods by which these might be mitigated or prevented.

Perhaps I am justified in making this suggestion, seeing that a few years ago I advocated it publicly, with the result that I brought upon my head a perfect avalanche of attack from so-called "humanitarians." I submit, however, that events have proved me and not the humanitarians to be right. Putting aside the incalculable mischief and loss caused by the indefinite

multiplication of these creatures, which, by the way, is largely brought about by the remorseless destruction of their natural enemies, the hawk, the owl, the stoat, and the weasel in the interests of game, the bacillus of plague is not an agreeable guest in any country. Further, it may prove one to which it is not easy to show the door.

As all students of mediæval epidemics of this and kindred scourges will be aware, and also of modern outbreaks in other lands, often enough it first appears among the lower forms of life, and from these proceeds to its attack on man, as no doubt happened in the case of the recent deaths in Suffolk. Sparrows also, I am told upon scientific authority, can by means of fleas carry the infection as well as rats. Perhaps I may be forgiven this digression, as the matter seems to be one of some present importance, at any rate in East Anglia.

Another method, this time indirect, by which the State gives great assistance to Danish agriculture, and especially to the export trade, is through the railways which, with the exception of some local lines, are owned by the Government and worked for the benefit of the community as a whole. As a result these railways do not pay a high rate of interest, but the farmers' produce in Denmark is carried at about half the price of that consigned by the farmer in England. This of course makes an enormous difference in the profit that it is possible to earn on the sale of such articles of food as milk, fruit, eggs, poultry, meat, &c., in the great consuming cities.

Still it must be remembered that most Danish produce is despatched by the co-operative societies in large lots that minimise the cost and labour of handling.

To deal with a truckload of any given commodity is a very different affair to the despatch of a few insignificant parcels of the same commodity. It is only right, however, that the farmer should acknowledge with gratitude the concessions made by the Great Eastern, and I believe by some other railways, in carrying these parcels at a special rate, particularly as privately owned lines, such as the British railways, are not philanthropic institutions, but exist to earn dividends for their shareholders. Whether they would or would not earn larger profits by reducing their charges on all agricultural goods, such as milk, is a question for them to consider.

Probably they argue with some force that as the milk can only be conveyed to market by their help, they are justified in imposing any charge that the producer will pay. When the British farmer has learned to co-operate and to despatch his goods by the truck or trainload, perhaps the railways will meet him in the matter of traffic dues, especially if the postal authorities can be induced to greatly extend the weight limit of the parcel post, as I have often urged should be done. Another possibility is that the fear of the competition of road motor services may induce the railway companies to reconsider their rates.

At present, however, the Danish farmer has a great advantage in this matter. Even the steamships which bring his butter and bacon from Esbjerg to England receive, I am told, a substantial Government subsidy, and are therefore able to carry these goods at a most moderate charge.

## INSPECTION AND STAMPING OF MEAT IN DENMARK AND SUBSIDIES TO AGRICULTURE

THE methods of Government inspection and stamping of meat in force in Denmark have the double advantage of protecting the consumer there and abroad, and of helping the producer by guaranteeing the quality of his meat and therefore securing to him a safe and constant market. Under the law of 1908 the export from Denmark of the flesh of cattle, sheep, goats, pigs, and horses that have died a natural death, or, as my Danish informant puts it quaintly, arrive at the port "in question-causing shape" (like the ghost of Hamlet's father), is strictly forbidden. The export of any carcases or slaughter-house trimmings or refuse is also forbidden, unless these have been examined and passed by a State-appointed veterinary expert. The result of this law is, I understand, that practically no unsound meat leaves the shores of Denmark.

As regards the home sale of butcher's flesh, the regulations vary in Denmark, the communes and town councils being at liberty to decide whether or no they will submit themselves to a meat control. In some of these communes this control is regulated by the Agricultural Department, and the veterinary responsible for it must obey the rules laid down by that authority. Meat produced in such a commune and stamped as first class can be sold all over Denmark without any further examination. In certain of the

communes all slaughtering is done in public slaughter-houses, and in others in private abattoirs, but the control is always exercised by duly qualified veterinaries.

After inspection, if found absolutely healthy, the meat is stamped as first class. If not above suspicion, but still in such a state that it can be eaten after cooking without danger to the consumer, it is stamped as second class. If it is tuberculous, but with the infected parts cut away, it is destroyed or properly sterilised under strict inspection by heating to a high temperature. This sterilised meat finds a ready sale among the poor in the large cities, but the small towns will hardly buy it at any price.

The law of 1908 provides that all meat for export must be killed in public slaughter-houses authorised thereto by the Minister of Agriculture and subject to regular Government inspection. Also a new Bill is now before the Danish Parliament which, if carried, will extend the working of meat controls throughout the country.

Nothing shows the exact and detailed interest that the Danish Government takes in everything that has to do with agriculture more than a list of the rural institutions, &c., which it subsidises, often by the grant of quite small sums to individual societies. Here are some if not all of them: The Agricultural and Veterinary College, Copenhagen; Scholarship Allowances, High Schools and Agricultural Schools, Experimental Stations, Waste Land Reclamation, Laboratory of Research, Agricultural Societies Cattle, Pig, Horse, and Poultry Societies, Control Unions, Government Experts, Government Butter Shows, Housemen's Schools, Destruction of Rats, and I think others which I cannot recall.

## WHAT MIGHT BE AND WHAT IS

I HAVE now reached the end of my review of the present state of Danish agriculture so far as I have been able to ascertain its conditions by personal inspection and inquiry. Also I have tried to indicate by contrast in what particular ways it differs from that which we know at home. Perhaps it may prove amusing if not useful if I attempt very briefly, as a conclusion to my book, to work out this contrast by the help of a fanciful example.

Let us suppose that a few generations ago a new Danish invasion of England had taken place, and that the East Anglian and some adjoining counties had been repopulated or were dominated by Danes, as happened in the days of King Canute. In that event what would be the agricultural condition of those counties at the present time? I think somewhat as follows :—

By the working of the Danish laws of inheritance and of the general customs and instincts of that people the large estates would be broken up into much smaller holdings, except here and there where some great landowner of the type of Mr. Tesdorpf farmed an extensive property. All the fen and other suitable lands would be divided among a multitude of little freeholders, or perhaps of State tenants holding under a perpetual lease. In every country town would be seen the tall chimneys of the butter, sugar-beet and bacon factories, and in every city great co-operative milk-distributing companies would be established.

Probably also there would be co-operatively owned grinding mills which would return to the producer some of the profits that are now divided among the millers.

Dotted about the countryside would appear many more farmsteads than are to be found to-day, each of them the residence of a small landowner. In fact in this respect it would have resumed the aspect that, to judge from the countless remains of manor-houses which can still be traced, must have prevailed in and about the Tudor period.

In every one of these houses and in a great number of the small-holders' cottages the telephone would be installed ; not the somewhat ineffective instrument with which we are acquainted, but one of real use out of which the voice of the speaker, be he far or near, comes with perfect clearness and without delay. This advantage, too, would be secured at a fraction of the almost prohibitive price that is demanded in return for the installation of telephones in our rural districts. Also every village of more than a certain size would be lit by electric light, as in Denmark—no small boon in the long winter season.

The great cottage question, too, now so insoluble, would have been met by the erection, with the aid of co-operative building societies, of a sufficient number of wholesome and suitable dwellings, most of which would be owned by their occupiers. The railways would belong to Government, and carry passengers and goods at about one-half of the present rates.

The general prevalence of co-operation would have brought into existence great numbers of local societies, large and small, thus favouring intercourse and mutual trust between man and man. Corn-growing would still be practised to a considerable



extent, especially upon the heavy lands to which it is naturally adapted; but the number of cows and horned stock, and also of pigs, that were kept would be enormously increased. Every one of these cows would be visited fortnightly, not by a Government inspector, but by a skilled person, probably a woman, highly trained in the State colleges, who would test its milk, prescribe the exact proportions of the food it should receive, and if it were sick how it should be treated. Moreover, there would be hospitals to which ailing beasts could be sent for a small fee.

In the towns not far from the factories would stand the High Schools, to which young men and women would flock to complete the education that they had begun in the State elementary and secondary schools.

The labourers would not be so numerous as they are at present, because many of that class would be working on State small-holdings of their own, and more of the families of the small farmers would be employed on the actual business of their farms. Still the sons of these small-holders, or people who were saving money to enable them to fill that position, would supply the necessary labour upon the larger properties. Owing to the prospects of a local career which the land would afford in its improved state, the exodus from the country to the towns and overseas would be greatly lessened and the present rural population probably be doubled.

Land would have risen considerably in value for the reason that owing to the elimination of the tenant's profit, also of most middlemen's charges obviated by the working of the co-operative system, it would be possible for the owner-farmer to net a

much larger cash return per acre. Also the burden of the tithe, now so crushing on some of the cornlands, would have disappeared without any injustice to the present holders, whether clerical or lay. This would be brought about by the application of the principles of the Danish Act of 1903. Under this Act a capital sum is found by the owner of tithe-burdened lands to free these from that charge and provide an annuity for the clergy who were entitled to the tithe, and their successors.

Tithe may of course be redeemed in England at the present time by those who can afford so to do. The difference in the ideal future would be that such redemption would probably become obligatory by means of loans advanced by the State at a rate of interest that included a sinking-fund which would repay them automatically in a given term of years.

Credit Unions established on the principles that I have described would flourish everywhere, by the help of which the landowner could provide himself, on the security of his property, with working capital at the smallest possible interest. Also there would be Credit Banks for the benefit of small-holders and workers of allotments, all of which institutions would receive a certain amount of assistance from the State and be subject to its inspection and audit.

In one respect, however, the laws of our imagined community would differ from those in force in Denmark. There, owing to the narrowness of the country, a man may not add property to property. Here, as the land is wider, *provided that he farmed it*, or perhaps a stipulated proportion of it, he would be allowed to hold as much property as he chose. The object of the State would be to give every opening to the

successful agriculturist, and to enable him to cultivate upon whatever scale he preferred.

Moreover, the temporary accumulation of large areas in one hand would not matter, since at the death of their owner, if above a prescribed acreage, as a rule these would be distributed among his children, unless those children should choose to arrange otherwise between themselves. This they often do in the Channel Islands, where similar laws are in force.<sup>1</sup> Upon such distribution the State would rely for the circulation of land rather than upon the principle of compulsory purchase which has recently been introduced into our English system, bringing much bitterness in its train. The word compulsion as applied to the hiring or purchase of land would probably be ruled out of our statute-book; all such transactions becoming, as in Denmark, matters of voluntary agreement between man and man.

Now what would be the results of fundamental changes such as I have roughly sketched above? First and foremost, as I firmly believe, much of our land under the new system would produce nearly double what it does at present. The reader may be inclined to consider this a wild statement, as no doubt it might be designated if applied to picked farms to be met with in many places throughout the country, or even to certain fertile districts where by the intelligence and skill of man the soil is forced to do its best. But as applied to great areas in England this is not the case. There are thousands of acres now rented that do not yield much more than one-half of what they ought to do.

<sup>1</sup> See "Rural England" (New Edition), vol. i. p. 70.—H. R. H.

Perhaps I may be allowed to quote my own small experience as an example. Within the last four years, by the help of an able and enthusiastic steward, I have, in stock and crop, quite doubled the produce of some of the land I farm, and this without resorting to any form of what I may call fancy or market garden cultivation, or to the breeding of pedigree animals for sale abroad. My only methods have been to apply a sufficiency of money (about £10 or perhaps £12 the acre) and a sufficiency of muck, which, in the old farming adage, is "the mother of money." Not that I wish it to be understood that I am making considerable profits out of farming. This, I regret to say, is far from the case. I work two adjoining holdings, one my own property and another hired, about one-half of the 500 acres which I farm being rented. On the first, which has been in hand for years, I have just made ends meet in this disastrous year of 1910. On the second, taken over at Michaelmas 1909 in the usual weed-poisoned and exhausted state, I have lost £1 per acre, plus the interest of the capital invested, which £1 the acre and interest, or most of them, have vanished into the soil in the shape of extra labour and manure.

I wonder whether they will ever reappear, also, sometimes, why people farm at all? The capital employed would look much healthier in some foreign security, say an Argentine railway. So far as I am concerned, the answer to the second question is really twofold. I farm because I love the land, which both thought and observation tell me is the bed-rock of every thing, wherein man is rooted and out of which he draws all that makes him man, as surely as he does the corn and beef he eats. There-

fore if the opportunity comes his way there can be no worthier occupation than to cultivate the land. Moreover—and this is the second answer—I write upon this subject, and what claim should I have to do so if I did not study and make experiments, both as one who works acres of his own and also those that belong to others? Thus I learn both sides of the matter, the landlord's side and the tenant's side. I am aware that many think themselves quite competent to write and talk of agriculture who have never actually farmed. But surely it is only those who *do* the thing that can really *know*. Have we not been taught that an ounce of practice is worth a pound of theories?

A larger subject remains to be discussed. Does it pay to farm well in many parts of this country? When all is said and done, is not the old-fashioned tenant who “muddles along” with insufficient stock, growing half crops and employing half the labour that is needed per acre, wise in his generation? He gets a good house to dwell in rent free; to a great extent he lives upon the produce that he grows; his expenses are small, his anxieties are lessened, and he remains a person of some importance in his neighbourhood. If he did better by the land, the extra labour and manure would eat his added profit; he would be no richer at the end. That is how he argues, if he takes the trouble to argue.

There is something to be said for this line of reasoning. The sad truth is that under our present system farming, high or low, except under exceptional circumstances of markets, soil, and locality, or other advantages, such as the breeding of pedigree stock, scarcely pays its way, at any rate in this and some

other parts of the country. It ought to pay, but the tax and rate collectors, the tithe-owner, and the middlemen get the most of whatever increment is earned. The land is staggering beneath the cost of its upkeep and the burdens that accumulate on it year by year. It can scarcely support the owner, the tenant, and the labourer in the face of foreign competition and at the present prices of produce. If one of these three classes were eliminated; if the burdens were lessened; above all, if co-operation were universal, there would be a different tale to tell in England.

Some may think this a pessimistic saying. They may point to recent paragraphs which they have read in newspapers about the demand for farms and the money that farmers are supposed to be making. Where are they, these money-making agriculturists? Why, when they come to die, do their wills so carefully conceal their gathered wealth? Of late years, it is true, there have been signs of hope. Rents in certain districts have gone up a little, which suggests that in those districts more people (some of them townsfolk as I am told) want to hire land; corn has commanded a better price; a few tenants, too, have purchased their holdings. But in this sorry season of 1910 corn has fallen again—like the rain—and so have sheep.

For the rest, is it not partly to be accounted for by the movement that is known as Tariff Reform? My conviction is that a great many farmers, good, easy men, believe or believed that whatever statesmen might say or leave unsaid, Tariff Reform meant rich round taxes on imported corn and meat. Also some of them believed that this halcyon dream would be almost immediately translated into fact.

But as Tariff Reform grows more nebulous, and

as it is driven into the sorely tried cultivators of the soil that even if it comes, whoever may be benefited, its hands will not be filled with gifts for them, may not depression once more possess them? If only their minds could thus be turned to search out other remedies for their troubles, such as that of ownership in the place of tenancy and of co-operation in the place of individual dealing, this new adversity would not lack its uses.

To return. If, however, any one doubts my general proposition, namely, that much of our land is not as well farmed as it might be, I would beg him to read a communication published in the *East Anglian Daily Times* of 26th November 1910 under the heading "The Abuse of Land,"<sup>1</sup> which I reprint as a footnote,

<sup>1</sup> "There are few tenant farmers in this country, and we trust few landowners, who abuse it, but it is impossible to close one's eyes to the fact that there is a great deal of land, especially in some counties, where heavy clay predominates, *which has been abused unmercifully; and although every man is supposed to possess a right to do what he likes with his own, there is a line beyond which no one should step where the interests of the nation are involved.* It is possibly owing to the fact that tenants are often difficult to obtain for land in bad condition that farms are sometimes let to men without either capital or knowledge, with the result that they are still further impoverished, and finally, on the tenant quitting, become a burden in the hands of the owner, who, it may be, has not the means of reclaiming, and who cannot find a tenant willing to pay him a rent for it. *There is no land, and we may refer to some of the strongest and foulest in the country, which will not respond to generous and determined treatment.* It is, however, this treatment of which so many fight shy. A tenant, especially a handy man, looks for an immediate return, and his every effort is in that direction. He cannot afford to wait, for the reason that he is not in possession of capital: hence he is precisely the man who should not be entrusted with a poor farm. He owns little or no stock, he cannot pay for manure, which he should do in its absence, he cannot employ sufficient labour, his equipment is bad, and he scrapes along, and in two or three years abandons the farm, possibly owing rent, and leaving the land foul, the gates broken, the ditches and hedges untrimmed, and the buildings in bad repair. How can it be otherwise? It is surely much wiser of an owner to let a farm free for

italicising one or two sentences. Every word said here by the writer, who is quite unknown to me, is true, and he might even have put the case more strongly than he has done.

Again, in the *Morning Post* of 6th December 1910, the day on which I write these words, is a report of the sixty-eighth annual general meeting of the Farmers' Club. In the course of a debate on a paper by Mr. W. A. Simmons, Mr. Christopher Turnor, a large and very well-known landowner, who, I believe, like myself has visited Denmark,

"advocated the adoption in England of a land policy of the kind which had had such beneficial results in Denmark and other countries, along with subsidiary industries for the special advantage of the small-holder. He held that the multiplication of owners lay at the root of our national stability, and he considered that it would be wise policy if steps were taken without undue haste to increase the number of owners, which incidentally would have the result of attracting a larger population to the country, thereby improving the physique and health of the population, which were threatened by living in towns. Apart altogether from any social or political reasons, financial pressure must of necessity compel a large number of owners to sell

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two years to a responsible man with knowledge and means, and thus give him a chance of making it pay him, and at the same time of providing for rent in the future. I once inspected a heavy-land farm in a district in which numerous farms of the same character existed. It was sold at a very low price to a popular owner of a fine estate in another county, who at once selected a tenant with whose work he was well acquainted, and whose wife was a most excellent helpmate, placed an adequate sum to his account in the local bank, and promised him the farm at a very moderate rent on his doing his best with it. *Some three years after the farm had been taken in hand it was nearly all reclaimed, well stocked, growing heavy crops, and in every sense looking prosperous, except where a small portion of the work had not been completed. . . . Apart from the fallow land, there are large areas which would pay for cultivation, including much heath-land of the country, which covers over 18,000,000 acres, and among the permanent pasture which has been laid down by Nature, or which man has laid down neither wisely nor too well."*



their estates, and in these circumstances he thought it would be for the general advantage if the tenants were assisted to become the owners of their holdings. He expressed his confident belief that by more intensive methods and by bringing into cultivation land which was now lying practically idle, this country could be made to produce £100,000,000 more food than at present."

Here, then, if I err, are two witnesses who err with me, and such testimony might be indefinitely multiplied. But I am as sure as we can be of anything in this fallible world that I do not err. Let any competent agriculturist who has doubts hire a motor car and drive through our heavy-land districts and there observe for himself. He will find hundreds of acres in a parlous state, and if he looks into the buildings attached to them he will find but a half, a third, a fifth perhaps, of the stock that those acres would be carrying in Denmark or even in some other districts of our own country.

With certain exceptions, in such districts it is not the English land but its treatment which is at fault.

Many tenants also have a habit of taking far larger farms than they have either the capital, the energy, or sometimes the skill to manage. Often enough the man with about £1000 in cash, who should be content with about 100 acres, burdens himself with 200 or 300, and so on, with the result that, owing to insufficient equipment, labour, and manure, his crops are wretched, while his stock, upon which perhaps some bank or dealer has a lien, is totally inadequate. Or perhaps all or nearly all his capital is borrowed.

It may be asked why a farmer of this class acts so foolishly. The question is not altogether easy to answer, but I will hazard one or two replies. Sometimes he hopes that a few lucky seasons may put

him on his feet. Sometimes, too, at the back of his mind works the knowledge that after all he is but a yearly tenant. But in my view the chief cause is that not one British farmer in twenty owns the land he tills. If he did he would look at things very differently. He would know, in the modern catch-word, that he must either "get on or get out," and that if he got out his run-down property would fetch little on sale and be almost valueless to let. So he would get on, actuated thereto by the "magic of ownership."

A potent factor in a possible increase of production which, if co-operation were added to it, would answer most if not all of the problems of rural depression in Great Britain would be the application of a more intensive system of culture to the land. Thus many fourth-class pastures (into which, by the way, 63,000 more acres have gone down in 1910, notwithstanding the proclaimed revival in agriculture) that, as the saying goes, would "starve a goat," might be brought into tillage and replaced by clover lays and other fodder crops. As Arthur Young remarked long ago, nothing is farmed worse in wide districts of England than are the grass lands, which are supposed to be able to look after themselves. I may add also, from personal knowledge, that no circumstance in our agriculture astonishes and indeed horrifies the Danish farmer so much as does our huge acreage of wasteful and indifferent pasture.

Again, if the Danes owned it, much of our waste land that is not cultivated at all, or only half cultivated, would be brought under the plough, or if it did not pay thus, would be afforested. More cows would be kept, of which the surplus milk would go to butter

factories, and this of course must mean a vast addition to the number of the pigs that fatten on the skim. There would be many more fowls also, and an enormous consequent increase in our egg output.

But it is useless to go into details. All that is happening in Denmark to-day would happen here, for the Dane, who reclaims his own sandy wastes such as we never touch, would be grateful if he could obtain even our more indifferent land at a moderate price ; and if he were its owner as distinguished from its tenant, by the help of science and co-operation, out of that land, as I believe, would in a few years produce much food and profit. As I have implied, my view is that in a couple of generations or less the countryside would shine with prosperity and teem with population, and this without the help of Protection or any other adventitious aid. On the other hand, however, our rural districts might become less popular as a place of residence for very rich people, and if so, those classes that depend upon them would suffer to some extent. Also the small shopkeepers would be affected by the general adoption of a co-operative system, and the number of middlemen would be much lessened.

It is sad to reflect, however, that such a state of affairs as I have tried to depict above is, and must remain nothing but a dream so far as England is concerned ; "all nonsense," as Mr. Tesdorpf said of the Danish small-holdings.

The optimist may ask why, and I will answer the question to the best of my ability. Till within a few years ago, that is, from the date of the great depression which began in 1879 and onwards, it was the fashion

to look at the land of England from two different points of view.

The wealthier classes, who form the backbone of the Conservative party, or a considerable proportion of them, came to regard it very much as a plaything ; a place where rich folk could enjoy large houses and first-class hunting and shooting. The mass of city-dwellers, on the other hand, who form the backbone of the Radical party, looked on it as a negligible quantity. These live by trade, and for the most part on imported food. They had heard that half of the English land was owned by 5000 people, so in their view it was simply something that belonged to a few opulent individuals who did not share their political opinions. Therefore it became the object not only of their indifference, but often of their active dislike.

During the last few years, however, there has been an undoubted stirring of the dry bones of Radicalism ; its town-dazed eyes have learned to see these matters in a truer light. Some of us also have tried, however ineffectually, to preach a crusade on this subject, and certain thinkers and statesmen have listened. No doubt, too, they have reflected for themselves.

At any rate one party in the State has begun to take an active interest in the land, as is evidenced by the passing of the Development Act and other measures. But that interest cannot be said to be shared by all. Although the leaders of the Conservative party have announced their intention of instituting a State-aided system of land purchase whenever the electorate gives them the occasion, I doubt whether even now many of the supporters of that party realise the pressing importance of all this

problem and the great opportunity with which circumstances have once more provided them in the matter.

Things have come to this over large stretches of England that few proprietors of land, except those who own great acreages, or rich soil that still lets at a very high rent, really live out of their land. They live upon the produce of other investments, made perhaps in Johannesburg or the Argentine or elsewhere. They are no longer country gentlemen in the old sense, supported by their estates, but gentlemen of wealth residing in the country.

Often enough, however, this is not their fault but their misfortune. Rents over wide areas of England, and especially in the corn-growing districts, have, until quite recently, almost continuously decreased since about the year 1880. Thus in "Rural England," vol. ii. p. 433, amongst other instances I print the balance-sheet of an East Anglian estate belonging to a gentleman of my acquaintance, which covers 16,000 acres, and in the years 1899 and 1900 produced a gross rental of £10,000 a year. Except for some drainage and land-improvement charges amounting to under £2000 a year, this estate is practically unencumbered; also the shooting was let for £1340 a year, and the garden produce sold. Yet from all this great property the owner received in 1899 only £231, 12s. 2d. paid into his account, and in 1900 £298, 13s. 1d. Of the nominal rent-roll over 16 per cent. was disbursed in tithe and about as much more in repairs. Probably since 1900 the rents may have risen a little, perhaps as much as 10 per cent., though this I doubt. On the other hand the rates and taxes and other sundry outgoings will certainly have risen also, so that the owner can be but little richer now than he was then. If he tried to

live upon the proceeds of his great estate, figuratively he would starve. Yet, if that sound, heavy-land, corn-growing property of 16,000 acres lay in Denmark, I am as certain as I can be of anything that it would produce a good many thousands a year in net profit, and that its present population would be doubled or trebled. Why? The reader of these pages may be able to answer the question.

Except in the fenlands it is the same story almost everywhere in East Anglia, for such rises in rent as there may have been in the last few years scarcely counterbalance the ever-growing outgoings. I know it myself. Personally I have to do with a small property, most of which I cannot farm because it is so scattered.

This land is totally unencumbered, and some thousands of pounds have been spent upon the buildings during the past five-and-twenty years. Yet the net receipts steadily dwindle, in some years when the repair-bill is heavy, almost to vanishing-point, and, the alleged "boom" notwithstanding, to sell purely agricultural East Anglian land in these markets is impracticable at a reasonable price. Whatever may be the reason, if those acres of land were situate in Denmark their produce in cash would be very different. As it is they now bring in about, if not less than, one-third of what they did forty years ago.

Considered as a financial investment, the holding of landed property in many parts of England has become but an empty farce; from a business point of view our system seems a failure. The land, at any rate under the present methods of culture, carrying its present fixed burdens and at the present prices of produce, can rarely return three clear living profits

—one to the owner, one to the farmer, and one to the labourer. I suggest that the first two of these might with advantage be amalgamated as they are in Denmark. The owner should be the farmer or the farmer the owner.

As I need scarcely add I am well aware that even if such were the case the difficulties would not be done with. Thus if the owner farms he must find the capital to enable him to do so. All that he would gain would be the tenant's profit, whatever that may be. In the same way, if the farmer owns he must provide or borrow the purchase price of his land, the interest on which would thenceforth represent his rent, unless, indeed, he can persuade the State to do this for him, as the Irish have done.

The beneficial results of a change from tenancy to ownership therefore would be but gradual. But, as I believe, these would follow certainly, if slowly, and not the least of its indirect benefits would be the spread of general co-operation. I am told, however, that the tenant as a class has no wish to buy, that he prefers "a generous landlord." If this be so there is nothing more to be said. But on the other hand, I observe that the Central Chamber of Agriculture and, I believe, over a hundred other Chambers have passed practically unanimous resolutions in favour of Mr. Jesse Collings's Land Purchase Bill. This seems to suggest that farmers, after all, do desire to own the land they till. In any case, far be it from me to presume to criticise the judgment of others or to offer them advice; indeed I hope it will be understood that I have no such intention in anything I may have written in this book. I deal merely with facts and principles, and do but set out for consideration

certain general conclusions which I believe to be true.

It may be pointed out that, fallen rents notwithstanding, as many country houses are kept up as there ever were. This is so, and I will add that perhaps more money is spent in them than before, especially where they are let to rich tenants. But if the owner lives in them himself, I repeat that in most cases he is supported, not by the land, but from outside sources, such as town property. Or perhaps he exists upon the shooting-rents.<sup>1</sup> For many reasons this is a state of affairs which cannot be called healthy or even right.

Some readers may ask how in these circumstances it comes about that properties are still purchased, even in East Anglia. A study of the auctioneer's advertisements will help to furnish an answer. On what do those advertisements most insist? Not on the net return obtainable on the upset price, not on the agricultural capacities, but on the sporting and social advantages of the property offered. Also often on the luxury and accommodation of the mansion, which is generally stated "to be suitable to a nobleman or gentleman of wealth."

Many people labour under the impression that most of the great estates are rapidly disintegrating beneath the pressure of the bad times, or from other causes. Now and again they see in every newspaper statements to the effect that such and such a peer or large landowner has been driven by Mr. Lloyd George's budget to sell his land. If looked into it will be found, how-

<sup>1</sup> " . . . especially when we think of *all the estates hereabouts (i.e. in Norfolk) which apart from the shooting have little or no value at all.*"—From an editorial note, *Eastern Daily Press*, February 20, 1911. The italics are added.—H. R. H.



ever, that often enough what he has done is only to sell some outlying property in a part of England where, owing to local conditions, it happens to command an excellent market. Indeed one peer, whose auction I see has not proved very successful, quite recently explained this in the Press with a frankness that must have been disconcerting to those who were offering him their sympathy. If added up, also, the total acreage actually disposed of to farmers, often by allowing most of the purchase price to remain on mortgage, would be found to be somewhat disproportionate to the attention that it has attracted.<sup>1</sup>

Further, it is one thing loudly to announce the intention of selling estates and quite another to carry those sales through upon advantageous terms. Leaving out choice sporting and residential properties, my belief is that half the land of England is, and for years has been, for sale, if only purchasers can be found prepared to pay a price in any way proportionate to what has been spent upon that land. That estates should be put upon the market is no new thing, since doubtless hundreds of the owners of agricultural land are but waiting an opportunity to be rid of that which only brings them trouble and anxiety and comparative or perhaps actual loss.

Since the above passage was written I observe (in February 1911) that the Marquis of Graham has

<sup>1</sup> "It is more than possible that the insecurity is by no means so widespread as is made out, and that the recent changes of ownership have been forced into a prominence that they do not deserve. There have been some conspicuous instances of the break up of historic properties; but we doubt if the recent sales represent any appreciable fraction of the land of the country, or are so much in excess of the changes of ownership usually taking place as to justify any supposition that a new régime is at hand."—*Agricultural article, "The Times," February 27, 1911.*

announced his intention of selling the Great Glemham property in Suffolk. The reason given by the Marquis for this contemplated sale, which is almost the first of the sort that I have heard of in this part of East Anglia, is—

“That the tendency of . . . all the present day legislation was to increase the financial burdens on land, and, moreover, to increase these burdens out of all proportion to those levied on other forms of property. The Chancellor of the Exchequer had said that his ambition was to break up large landed estates, and the Solicitor-General that they would not rest content until the present indirect taxes were abolished and all the necessary revenue raised by taxes upon land. Under these circumstances it was quite evident that land was to be heavily taxed in the future, and that the present valuation and Form IV. were instruments to this end.”

I can only trust that Lord Graham is mistaken in these views. Personally, I hold that no British Government, whatever its political complexion, would be so mad as to place further burdens upon agricultural land such as that which is comprised in the Glemham Hall estate, with which I happen to be acquainted, having stayed there with a gentleman who hired it for the shooting.

Indeed, to do so under present conditions would be to strike a deadly blow, not only at agriculture, but at the welfare of the nation as a whole, seeing that this welfare is in various ways dependent upon the prosperity of the land. If the land is not prosperous it cannot rear a sufficient rural population, and without such a population our greatness will dwindle and in the end our country must fall.

In fact, the argument might be extended from the instance of Great Britain to that of her overseas Empire. I am informed, I can only hope wrongly,

that in no part of this vast Empire is there a normal birth-increase of the Anglo-Saxon inhabitants, save among the Roman Catholics in Canada, and these, of course, are French, not Anglo-Saxon. This means, if the statement is true, or even approximates to the truth, that the Empire also looks for population to the rural districts of these little islands, since that which comes to it from the lower social strata of our cities is not welcomed and in some cases not admitted.

Rather do I trust and believe that the efforts of our Governments will in the future be devoted to the lightening of the burdens upon agricultural land. If such land should pass into more hands than hold it at present, I am indeed sure that this will happen. Also unless those burdens are lessened small-holdings can scarcely prove successful.

To return. If the truth could be known, it would probably be found that during the same period of time almost as large an area was incorporated in residential estates as has been shed from them by sales. Only, when some rich person buys up an adjoining property or a few outlying farms that interfere with his convenience, he does not advertise the fact in the newspapers.

The practice is very ancient. Said Isaiah 700 years before Christ: "Woe unto them that join house to house, that lay field to field, till there be no place, that they may be placed alone in the midst of the earth!" What was the effect of the prophet's anathema in Judæa is not recorded, but certainly it has none in England, where field is still laid to field without any evil results to the layer. Still, except in the rare cases when it is bought as a sound financial investment, we may sometimes be

tempted to wonder what good results the constant accretion of real property brings to its purchasers. It is easy to understand the action of any man who buys agricultural land, even in large quantities, for the purpose of farming the same. But what proportion of landowners actually farm their acres, or even a part of them? Unless they are driven to it by one circumstance or another, I imagine but a small one. With exceptions, some of them notable, however well they may be able to afford the experiment, this is a responsibility and a labour which they do not face. The gentleman who farms for the love of farming or to try to live out of it is a comparative rarity, and the gentleman who hires land to farm is often looked upon as "a little odd." Some other farmers in their hearts think that it is not quite the thing for him to do. It does not seem to occur to them that of all secular professions, with the single exception perhaps of that of medicine, farming is really the cleanest and the highest.

As an example of what I mean I will take the case of many gentlemen's sons. Perhaps these have failed to pass competitive examinations, or perhaps, reverting to an earlier type when men lived in more primitive conditions, they have announced that in this way or in that they wish to earn their bread on the land and not in an office. Then what happens? In many cases they are sent off "to the Colonies to farm." Generally this means to work as agricultural labourers, only much harder than labourers work at home. There some of them succeed and some fail. I have known a good number to fail even when they had capital at their backs, for capital can be lost by the inexperienced in colonies.

A very considerable agricultural authority both in

theory and in practice, whose name I do not mention as I have not asked his leave to do so, told me only the other day, after a recent journey through Canada, that in his judgment a hard-working young man of ability with any capital at all had a better chance of success as a farmer at home than in that country. Also he said that his life here would be less laborious and more agreeable.

Why, then, are these young men so frequently shipped to colonies to pursue the profession they have chosen, that of cultivating the land?

In most instances, I believe, for the reason that I have given above, that it would not be thought "quite the thing" that they should come down to the status of the ordinary tenant farmer. Abroad they may do what they like without loss of caste, even serve as yard-boy to some uneducated Boer or tend a bar. But in England it is different. Yet if they were furnished with a really scientific agricultural education such as lies within the grasp of any Dane at a most moderate cost, I agree with my friend that notwithstanding all the disadvantages to which I have alluded, those of them who can command any capital would have on the whole a better chance in certain districts of England, and especially in those where fruit is grown, than they can expect to find in distant parts of the earth, far away from all their friends and associations. Especially would this be so if they could buy and sell co-operatively.

There is one fear, however, which doubtless has its weight with parents and guardians. Abroad they must work or come to grief. At home, where things can more or less be left to subordinates, the work is not an immediate necessity.

Sport and society are great temptations to the young, which only those of unusual grit and determination find themselves able to resist. Also that prolonged scientific training in the business they have chosen, without which success is improbable in a settled land, is generally lacking. I may add that on these matters I do not speak without my book, as I have myself some experience of the risks and hardships of colonial farming.

However these things may be, save for the purposes of agriculture and one other which I will mention presently, no individual can really need a large extent of land. A few hundred acres about his house, with a wall built round it, will keep him as private as even the most exclusive person could desire. That other reason, ruling out those of pomp and social advantage, is sport. Good shooting can only be obtained on a large property, either owned or hired. Indeed I believe that from the time of the Normans, when William the Conqueror and other tyrants destroyed the villages and drove out their inhabitants to make room for deer, one of the principal causes of the creation of large domains has been the desire for sport.

This in itself is innocent enough, but the question will arise whether a country may not be asked to pay too high a price for its gratification. The fact is that the pheasant, which Mr. Kipling has truly called "the lord of many a shire," is an obstacle to any signal alteration of landed conditions in certain parts of Great Britain. As I have already remarked, small farmers and pheasants do not get on well together, and the same may be said of such folk and partridges or foxes, or of crofters and deer in the Highlands.

Here is an instance taken from a report of a Board of Agriculture inquiry held in the Eastern counties in January 1911.

A County Council desired to take thirty acres of land from a certain estate for the purpose of small-holdings. The owner resisted stoutly, with the result that this inquiry was held. How it has been decided I do not know. In giving evidence the owner's lawyer stated that the property had been purchased "for the purpose of acquiring a country family residence and for sporting rights," and that his principal had settled there and spent a very great deal of money "with a view to having good shooting." Also the owner himself stated that he thought the taking of the thirty acres "would altogether spoil the shooting."

Obviously this gentleman is in no way to blame because he objects to a use being made of his land that in his view will interfere with the purpose for which it was purchased by him. Indeed it appears to me that he deserves some sympathy. Doubtless he bought his property not from philanthropic motives or to multiply small-holders, but, as he says, to enjoy good sport. Probably if he had known that a portion of it was to be seized by the County Council and used as small-holdings, he would have declined to buy. In a sense, indeed, the State seems to have broken an implied, if not an expressed bargain, namely, that he should enjoy quiet and undisturbed possession of his own. I repeat that his case is a strong one. That shooting and small-holdings do not agree together is no fault of his.

I hope, therefore, the reader will understand that I have not entered on this disquisition without a

purpose, or to grumble at men of great wealth who for their perfectly legitimate ends purchase or build up large estates and thereby artificially perpetuate a system that under our present conditions is, perhaps, harmful to the best interests of the Nation. My object has been to demonstrate our agricultural state as compared to that of Denmark which I have endeavoured to set out in the foregoing pages, and incidentally to discover whether by any chance the two can be assimilated.

I regret to say my conclusion is that this seems to be difficult if not impossible. The attitude of the two peoples towards the land is fundamentally different. The Danes look upon their land as a principal means of livelihood and as a nursery which above all things should be consecrated to the upbringing and home-life of a healthy and numerous rural population—in short, as a business proposition in which the Nation is most vitally concerned.

In the main, although we may not acknowledge it, we look upon our land, or much of it, as a pleasure proposition in which the individual only is concerned, or so it appears to me. Incidentally we cultivate it, but not always as well as it might be cultivated. Incidentally, or accidentally, a certain number of people are reared upon it, but not half as many as might be reared. Further, when these are grown up it affords to them no career. A few for whom there is room stop as agricultural labourers or as their wives, for the most part without prospect of bettering themselves in life. One in a hundred becomes a small-holder, one in a thousand becomes a tenant-farmer; the rest, who can find neither work nor outlook, must perforce migrate to the cities or across the seas.



Moreover, long-continued custom, reliance on imported food-stuffs and other sources of wealth, have brought it about that our people as a whole seem to wish no change. Now and again the existing state of affairs excites some spasmodic interest in the breast of politicians, but that interest is apt to pass when the difficulties in the way of far-reaching alterations are appreciated. It is quite a question also whether the tenant-farmers themselves as a body do in fact desire any change, even if such a change should result in converting them into freeholders at the cost of a not much greater annual expenditure than they incur at their present rents. Certainly most of them would not favour the creation of large numbers of small-holders, since this is a class which they dislike.

In conclusion, what are the principal lessons to be learned in Denmark? As I see them, briefly and broadly these:—

(1) That in a free-trade country of limited area and lacking virgin soil, co-operation is necessary to a full measure of agricultural success. (2) That only freeholders, or farmers holding under some form of perpetual lease such as that suggested by Mr. Waage, which in practice amounts to much the same thing as freehold, will co-operate to any wide extent. (3) That the accumulation of estates which for the most part descend intact from one owner to another, and are hired out piecemeal to tenants, is not conducive to the multiplication of freeholders, nor therefore to the establishment of general co-operation.

These are the main lessons, but there does not seem to be much prospect that they will be applied in Great Britain. Of course the thing might be done.

By the simple adoption of Mr. Jesse Collings's Bill, or of some modification of that Bill, freeholders might be created in considerable and increasing numbers. Or if this method were found to be impossible, land-workers of certain classes could be furnished with perpetual tenancies held under the State. Or British farmers might be endowed with some of the opportunities of State-aided purchase and of the other great advantages which our Governments hasten to shower on the people of Ireland.

Or properties of over a certain size might, with sundry limitations, by law be made divisible among heirs, as is the custom in many other countries. Obviously this expedient must circulate the land in a more effective and natural fashion than would any other method.

But one political party objects to the multiplication of freeholders for its own reasons, whatever these may be, while another political party objects with even greater vigour to the creation of State leaseholders upon a large scale. This, it says—perhaps with truth—would savour of land nationalisation. Lastly, all parties would probably demur to any change in our law and customs of inheritance. Also their spokesmen point out as a reason for refusing to Great Britain what is freely granted to Ireland, that “the circumstances of the two countries differ.” And so they do, to the extent indeed of 75 or more of solid Parliamentary votes. Whichever way we look the road is barred. The occasional buying of farms by tenants from their landlords in order to save themselves from disturbance, involving as it does in most cases the borrowing of money at  $4\frac{1}{2}$  per cent., in my view will never alter the situation to any marked extent.

Thus things stand, and, after all, every community has a right to choose its own path to success or failure. So far as the land is concerned we seem to have chosen ours; and if so, what more is there to be said? We might change our system if we wished. The will is lacking, not the way. Perhaps, after all, this feudal system of landlords who do not farm their estates but let them out to others is that which suits us best. Perhaps, too, I am wrong in my conviction that it would be to the great benefit of the Country, and, for reasons that I have given, even of the Empire, that British land, a very limited commodity after all, should be popularised—like Consols.

Only one consolation remains to such of us as may think our policy unwise, or at any rate to this writer. Were we to take another course which would enable British farmers to adopt and grow rich on the Danish methods of ownership and co-operation, we could with ease—or so he holds—without lessening our present agricultural output, produce in addition to it every pound of butter, every side of bacon, and every egg that the Danes now deliver on our shores—yes, and twice as much.

But if this happened, that intelligent, industrious, and charming people might lose their best, if not their only market.

## APPENDIX A

### REGULATIONS FOR THE SUPPLYING OF MILK TO THE COPENHAGEN MILK-SUPPLY ASSOCIATION

"ALL provender given to the cows must be perfectly fresh and in good condition. It must be free from everything that could communicate to the milk any abnormal odour or colour.

"In summer the cows must be turned out to graze, and be given nothing but grass and clover.

"Only in case of necessity may they be given dry forage and chopped barley, and that always in the open air. It is forbidden to keep them stalled during this period of the year.

"The farmer must arrange with the Society in advance as to the nature of the food which he proposes to give the cows during the winter.

"On this point, however, he must in any case adhere to the following rules :—

"(a) *Roots*.—Carrots and beetroot should be given in the proportion of one and a half bushels (36 litres) per cow, but only on condition that they are mixed with at least 5 lbs. (Danish) of corn, bran, and cake. Cows which supply milk for infants may only be given roots in the proportion of half a bushel. Turnips, cabbage, *choux-raves* (? kohl-rabi), swedes, and the tops of turnips or kohl-rabi (*raves*) may not be included in the food.

"(b) *Cake*.—Only oil and sunflower (*tournesol*) cake may be used in the proportion of at most 1 lb. (Danish)

with at least 5 lbs. (Danish) of corn and bran. Cows supplying milk for infants may not have cake.

"(c) All refuse from distilleries, &c., is forbidden.

"Before stabling the cows in the autumn, the tails, hind-quarters, and udders must be shorn.

"The calving periods must be so regulated that the quantity of milk delivered to the Society during the months of September and October is not less than the average quantity supplied during the first four months of the year.

"A farmer wishing to supply more milk than he usually does, must come to an arrangement with the Society beforehand.

"Milk from recently calved cows may not be supplied during the first fortnight after they come into milk. The Society also refuses to take the milk of sick (*malade*) cows, or of cows which do not give more than a maximum of 6 litres a day."

### *The Treatment of the Milk*

"The milking must be carried out with the greatest care and the greatest cleanliness. Speaking generally, it must be done under the following conditions:—

"(a) The milkers during the milking must wear a special dress, and be provided with a towel to use when they need to wash their hands.

"(b) The byre must be well lighted, especially behind the cow, in such a fashion that the milker can do his work properly.

"(c) Immediately after the milking, the milk must be passed through a metal sieve covered with a cloth of clean and fine linen.

"(d) Thereafter, the milk must at every season of the year be passed through a refrigerating apparatus, which lowers its temperature to 4° Réaumur (41° F.). It must be kept at this temperature until it leaves the farm.

"(e) The removal of manure must be carried out in the morning after milking, and be finished in the afternoon at least one hour before the evening milking.

"(f) The milk from cows that have just come into milk, that from sick cows, and also that from cows which are giving less than 6 litres a day, must be stored separately in such a fashion that it can neither be mixed or confounded with the normal milk that awaits despatch to the Society.

"The farmer must always have in store a fresh supply of ice, of at least 30 lbs. of ice to every 100 litres of milk.

"He must use the 'Lawrence' apparatus for the purpose of refrigeration, which apparatus the Society can deliver to him on his farm."

In addition to the above there are other regulations as to the delivery of the milk, &c., which it is not necessary to translate. A few, however, of more general import may be quoted:—

"The contractors are bound upon their word of honour to reply to all the Society's inquiries with reference to the milk which they supply.

"They are bound also to allow the veterinary officer of the Society to inspect their byres whenever he judges this to be necessary.

"Cows certified by the veterinary to be tuberculous must be immediately separated from the herd and sold, or killed as soon as possible.

"All beasts bred for milkers since 1896 must have been subjected to the tuberculin test. Also the injections must be repeated at least once a year in the case of animals that have not reacted to the test.

"The contractors are bound to supervise with the greatest care the health of all persons living or employed on their farms, as well as that of their own families. They are bound, in case an infectious disease should appear, to

notify the Society at once, which will forthwith take the proper steps to abate the sickness.

“In this case the Society declines the milk until every trace of the illness has disappeared. The Society, however, during this period will pay for the milk although it does not receive it.

“In case the Society discovers that the milk supplied is below normal in quality, and therefore not suitable for sale, it reserves to itself the right to refuse it without compensating the farmer.”

Such are the principal conditions of the Copenhagen Milk-supply Company.

Together with those which it has not been thought necessary to translate, they must be signed by the contracting farmer before he begins to supply milk to the Society.

It will be observed that these regulations are extremely strict, but I was informed that they are, as a rule, rigidly observed.

H. R. H.

## APPENDIX B

[In preparing this document for the press I have found it necessary to alter the language of the translator to an extent sufficient to make it clear to English readers. I hope and believe, however, that I have accomplished this very difficult task without impairing its vital sense in any particular. I trust that any student of the Act will observe into what depths of detail Danish legislators descend. This indeed is illustrative of the character of that people. Nothing escapes their foresight ; nothing seems to be too small to be worthy of their attention.—H. R. H.]

### ACT OF PARLIAMENT CONCERNING THE ESTABLISHMENT OF SMALL-HOLDINGS

*Ratified by H.M. THE KING on April 30, 1909*

#### I.—§ 1

A COMMITTEE is to be formed in each County for the purpose of assisting in the establishment and control of the holdings dealt with in this Act. The arable land belonging to towns but situated in a County is, as regards this Act, to be considered as County land. The Committee is to consist of three members, of which one is to be appointed by the Landbrugsminister (Secretary of State for the Agricultural Department, hereafter called the Agricultural Secretary). The other two members—together with a substitute for each—are to be elected by representatives of all the local communities (or Parish Councils), of which each community (or Parish Council) must send two representatives. The election of representatives as well as the final election of members of the Committee is to take place according to the rules of proportional representation prescribed for the County Councils.



Further regulations as to the election of the Committee and its work are to be laid down by the Agricultural Secretary.

The members of the Committee as well as their substitutes are to be elected for six years, but may be re-elected.

Costs of conveyance are to be refunded to the members of the Committee at the rate of 1 krone for each 5 kilometres travelled, or payment is to be made for a third-class railway ticket where railways can be used. The members of the Committee will receive as a daily allowance, when engaged in meeting or travelling, 6 kroner if the meeting or the journey has not occupied more than twelve hours, otherwise 10 kroner. The Chairman of the Committee will further receive in each financial year, in compensation for office expenses, an amount corresponding to 10 kroner for each case dealt with during the said financial year.

The expenses of the Committee are to be defrayed by the Treasury.

Should circumstances make it desirable, the Agricultural Secretary is authorised to divide a County into two districts, each furnished with its own Committee; and if a Committee so desires it, he is further authorised to appoint a builder, who may be consulted by the Committee when necessary.

## § 2

Any man or unmarried woman is entitled to the benefits of this Act *if* he (or she) is in the main earning his (her) living by ordinary agricultural work, including gardening for other people, whether he (she) is serving a master for some fixed period, or is earning his (her) support as a day labourer, or *if* he (or she) is, or has been, the occupier of a holding of a size similar to those defined under this Act. Country artisans, brickmakers, fishermen who have not received fishery loans from the resources of the State Loan Fund, and other persons who earn

some part of their living by ordinary agricultural work are also entitled to be taken into consideration under this Act.

### § 3

In order to obtain a holding on the conditions laid down by this Act the petitioner must

- (a) have the rights of a native or naturalised person ;
- (b) have completed his 25th year, and, as a rule, not be more than 50 years of age ;
- (c) not have been found guilty before the Court of any act which is disgraceful in public report, and for which he has not received honourable satisfaction ;
- (d) not have received any parish relief, that has not been paid back or dispensed with according to the Act of Parliament concerning public relief of the poor, dated April 9, 1891, § 35, 1st section ;
- (e) have earned his living by agricultural work for at least four years after the completion of his 18th year (this paragraph, however, to be compared with § 2) ;
- (f) produce a certificate from two reliable persons who are fully acquainted with his circumstances, and who consider him to be an industrious, sober, and frugal person who may be held capable of managing such a holding ;
- (g) prove that he is the owner of such means as, according to this law, will be necessary to enable him to take over the property (compare §§ 7 and 9) ;
- (h) be unable out of his own resources to become the possessor of a holding like to those defined by this Act.

The petitioner must prove before the County Committee mentioned in § 1 that he is fulfilling the above conditions by the production of such papers of legitima-

tion and proof as he may be reasonably supposed to possess, and further, by a declaration signed by him, in which he declares on oath that the information furnished is true. Certificates and testimonials given by private persons must be accompanied by the attestation of magistrates or of the Parish Council as to the trustworthiness of the signatories, and the petitioner must also produce an attestation from his Parish Council that he may be supposed to be a proper person to take over a houseman's holding.

Petitioners who prove that they have saved the moneys mentioned under *d* out of their wages, are especially to be taken into consideration when they can show equal claims in the other respects.

#### § 4

The lots that are acquired for the purposes of this Act, except by consent of the Agricultural Secretary, must not be less than 1 hectar (*i.e.*  $1\frac{812}{1000}$  tøndeland).

#### § 5

The lots are to be separately registered and assessed, if this has not been done already, and are to be registered as houseman's holdings. If the parties agree thereto, the assessment may be carried through by the instrumentality of the Agricultural Ministry, without regard to the size of the lots, either according to the register assessment or according to a subsequent taxation under the rules for such assessments. On the "folio" of the property in the index of the register of estates and titles it must be noted that the property is subject to the conditions laid down by this Act.

#### II.—§ 6

When a petitioner who fulfils the conditions stated in § 3 desires to acquire a houseman's holding in accordance with the regulations of this Act, but is not able him-

self to point out land which he can buy by agreement with the owner, he may apply to the Parish Council, who then will attempt to obtain offers of land from private persons, and on reasonable terms. Should the Parish Council not succeed in this effort, but find that in the parish there is land owned by the public suitable to the said purpose, the Council will open negotiations with the authorities concerned to bring about the purchase of the necessary land at a reasonable price. The Parish Council will inform the petitioner of the result of such negotiations, and, if a promise has been given as to the transfer, it is left to him to take whatever further steps are necessary to complete the purchase in accordance with the following rules :—

When land belonging to offices, public institutions, or churches is sold for houseman's holdings in accordance with this Act, the land may be acquired in such a way that a part of the purchase-money remains as a yearly charge, which, with the consent of the respective authorities, is fixed up to 10 kroner per tøndeland, to be secured as a prior charge to that of the loan from the State.

The Parish Council must see that the holdings acquired by its assistance are conveniently situated as to access to the roads.

The application from the Parish Council to the authorities concerned in the matter mentioned above must be made through the County authorities.

## § 7

When a petitioner, either himself or through the agency of the Parish Council (compare § 6), has chosen a plot of land which he wishes to acquire on the conditions stated in this Act, he must send his application through the Parish Council to the Chairman of the County Committee mentioned in § 1. The said application, of which forms made out according to instructions from the

Agricultural Secretary are to be obtained from the Parish Council, must contain the information necessary in order that a judgment may be formed of the petitioner's right to be taken into consideration, and it must further be accompanied by the papers of legitimation and the other proofs which the petitioner is called upon to produce (compare §§ 2 and 3). It must further contain a statement as to the approximate size of the lot and its situation, as well as the price at which it may be bought ; and, if the petitioner is not already the possessor of buildings, it must be accompanied by plans for the erection of the necessary buildings, and a statement as to the amount of capital he considers necessary to the erection of such buildings, as well as an estimate of the cost of the dead and live stock, &c. The total sum that the property will cost the petitioner (*i.e.* its loan-value to the Treasury) must only exceed 6500 kroner where the local values of land are exceptionally high, and in no case must the sum exceed 8000 kroner. The petition must be accompanied by a report from the Parish Council as to whether the selected allotment is suitable to its purpose, and whether the price demanded for the same may be considered reasonable.

The information received is first to be considered by the Chairman of the Committee, who will cause it to be supplemented by such further information as he may find necessary.

### § 8

The Committee is to go through the petitions sent in to ascertain if the conditions mentioned in §§ 2, 3, and 4 have been fulfilled, and if the plans for buildings, &c., are satisfactory. The Committee will make sure that the lot has free access to the public roads and is advantageously situated in this respect, and that there is a legally secured access to water from some other place if there is not, or will not be, a well on the allotment.

The Committee will then survey the lot and see if it is adapted to a houseman's holding, and if the price required

for it may be considered reasonable. If the petitioner is the possessor of buildings to which he intends to add the allotment, the Committee further must inspect such buildings to ascertain whether they are in proper order, and the Committee will also fix the value at which they may be estimated.

If the Committee then finds that the petition for a loan from the State is one that cannot be granted, the petitioner is informed thereof, as well as of the reasons of the refusal. If the Committee refuses the application because it thinks that the loan-value of the property will be too high, or that the petitioner does not fulfil the conditions mentioned in § 3, the petitioner may bring his case before the Agricultural Secretary, who will then decide thereon. A petitioner whose application has been refused cannot bring his case before the law-courts.

If the amount available in the financial year for the said purpose should not be sufficient in any given County to enable all the qualified petitioners to be taken into consideration, the Committee will make its choice between them. Petitioners who are refused on that account are to be taken into especial consideration during the following year should they again send in their petition. As soon as a decision has been come to, each petitioner is to be informed of the result.

## § 9

When the petitioner has received information from the County Committee that he is qualified to obtain a loan from the State for the purpose of acquiring land in accordance with the regulations of this law, and the Committee has no objection to the building-plans and the estimate produced, and when it has further been proved before the Agricultural Secretary by means of a declaration from the County Committee that the buildings on the lot have been properly built, and that the property has been furnished with the necessary live and dead stock, the petitioner may, through the County Committee, demand

a loan in cash from the State, which loan is to correspond to  $\frac{9}{10}$  (nine-tenths) of the value of the property.

The State loan must not, however, exceed the amount that corresponds to the purchase sum of the land and the cost of building the houses, or the value fixed, according to § 7, of buildings already belonging to the petitioner, and the loan may eventually be reduced to this amount.

If mortgages rest on the said property, in which charges State or local taxes, or tithes are not to be reckoned, the capital value of such ground charges is to be deducted from the State loan. This capital value is found by multiplying the yearly dues by 25. If the dues are paid in corn, it is converted into money according to the average of the last eight years' fixed price for corn, omitting, however, the highest and the lowest year. If the property is encumbered with a ground charge together with another property, and the person entitled to the charge will not apportion the charge, that part of it which corresponds to the size of the property in question (according to the standard of land tax) is to be commuted by paying out the capital value to the person entitled to the charge, in which case the State loan is raised together with the amount corresponding to that capital value.

The right to obtain payment of the State loan granted by the Committee lapses if the borrower has not made out the necessary bonds for the loan before the expiration of that financial year for which the grant has been given. Should circumstances justify it, the Agricultural Ministry may, however, deviate from this rule.

Transfers given by the borrower on the State loan, or any part of the same, may be written on unstamped paper.

### § 10

A yearly interest of 3 per cent. is to be paid on the State loan, which is secured upon the property with its buildings, live and dead stock, &c., which charge ranks after that of the prior ground charges. For the first five

years the loan is free from part payments, and after that time interest and part payments of the last secured two-fifths of the amount of the loan is to be made at the rate of 4 per cent. yearly. When that part of the loan has thus been paid back, the rest of the debt is also repaid at the rate of 4 per cent. yearly.

The loan cannot be called in by the State so long as the property in question is maintained in accordance with the purposes for which it was granted.

### § 11

To the loans mentioned in § 9 and the following § 13 there may be provided yearly for five years an amount not exceeding 4,000,000 kroner, which amount is apportioned in each financial year among the counties in proportion to the petitions received therefrom. Should the sum available in one financial year not be exhausted, the remaining part is carried forward to the following financial year. In the financial years 1910-11 to 1915-16, a sum may be spent for the same purpose corresponding to the amount that remains undisbursed of the fifteen millions of kroner granted for the purpose of providing holdings for agricultural labourers, according to the Act of Parliament of April 22, 1904.

That part of the loan which must first be repaid is supplied by the State Loan Fund.

The other part of the loan is temporarily supplied by the Treasury, but the Finance Minister has the right to transfer the first mortgage-bonds for the loan made out by the Treasury to the Kongeriget Danmarks Hypotekbank (the Mortgage Bank of the Kingdom of Denmark) at such a rate as the Finance Minister may agree upon with the bank.

Further, after such transfer the debtors may pay interest on, and part payment of, the bonds to the royal offices of revenue, where these payments have hitherto been made.



## § 12

Hired houses with land that have been specially registered may be acquired as housemen's holdings after the passing of this law, when the hirer fulfils the conditions made in the said law. In addition to the sum mentioned in § 11, up to 250,000 kroner may be spent yearly for that purpose.

## § 13

The owner of a houseman's holding established according to the Acts of March 24, 1899, or April 22, 1904, may, if he sends in his petition before April 1, 1914, receive an additional loan to defray the expenses of acquiring land for the extension of the holding, and of erecting the buildings necessary to that purpose. The additional loan is to be reckoned at  $\frac{9}{10}$  (nine-tenths) of the amount by which the loan value of the houseman's holding has been augmented (compare § 7), but the additional loan must not, however, exceed 2100 kroner if the holding has been established under the Act of March 24, 1899, and 1400 kroner if it has been established under the Act of April 22, 1904. In those cases where the original loan, owing to the exceptionally high prices of land in the said district, respectively exceeds 3600 kroner or 4500 kroner, the total sum of the original loan and the additional loan must not, however, exceed  $\frac{9}{10}$  (nine-tenths) of 8000 kroner.

An additional loan may further be granted to the owner of a houseman's holding established under the Acts of March 24, 1899, or April 22, 1904, or under the present Act, when, after the making of the original valuation, he has cultivated waste land belonging to the original lands of the holding, or has made such thorough improvements of the land, such as by draining, as have visibly increased the value of the property. The amount of the additional loan is in such cases to be fixed partly with regard to the increase in value produced by the said im-

provements and partly with regard to the increase in value which has taken place or will take place by the established or intended extension of buildings belonging to the holding, but in no case must the total sum of the original loan and of the additional loan exceed  $\frac{9}{10}$  (nine-tenths) of 6500 kroner.

The additional loan which is furnished by the State Loan Fund is advanced on the same conditions as the State Loan Fund's share of the principal loan, in such a way, however, that the additional loan is repaid in full fifty-one years and six months after the day on which the principal loan was granted.

The petition for such an additional loan, which can only be granted once, is sent in to the County Committee, and is treated in accordance with the rules set out in §§ 7-10. One-fourth of the sum mentioned in § 11 may be spent in each financial year in granting additional loans under this provision.

If the owner of a houseman's holding, established under the Acts of March 24, 1899, or April 22, 1904, through the Committee concerned proves to the Agricultural Ministry before April 1, 1914, that he is unable to extend his holding as there is no land available for purchase, and that he is therefore prevented from obtaining an additional loan, he may, if he sells his property to a purchaser who fulfils the conditions stated in §§ 2 and 3 of this Act, again obtain a State loan under this Act, notwithstanding the regulations set out in § 14 in the Acts of March 24, 1899, and April 22, 1904.

#### § 14

The borrowers' repayments are to be made half-yearly. Should a borrower desire to repay a larger instalment on some quarter-day, he is permitted to do so if the amount is not less than 50 kroner. The charges mentioned in § 6 are to be paid half-yearly at the same time and place as the payments to the Treasury. These

charges, as well as the Treasury's claims, may be collected by distraint.

### § 15

On the sale of land under this Act, the purchase deed or deed of conveyance must carry a stamp of the value of one krone. The mortgage-bonds to the Treasury and the State Loan Fund need not be stamped. This is also the case where the transfers from the Treasury to the Kongeriget Danmarks Hypotekbank are concerned (compare § 11). No fees are payable for registration, nor are any other public charges demanded from the borrower.

### III.—§ 16

The person who has had a property transferred to him on the foregoing conditions is entitled to exercise the full rights of ownership as to the same, subject to the restrictions set out hereafter and to the especial rights herein detailed.

According to this Act no person can obtain a loan from the State on more than one property. Nor can a person who has transferred a property acquired under this Act to some other person (compare § 21) again avail himself of the advantages of the Act.

### § 17

The mortgage-bonds must provide that if the owner removes from the property, lets any part of the land, or builds houses to be let on the land, the whole of the remaining debt will fall due for immediate payment without any preliminary notice.

### § 18

The holding must be used for ordinary agricultural purposes, the necessary live and dead stock must always be kept, and the buildings must be properly maintained.

The owner is bound to allow the County Committee admittance to ascertain that this obligation is fulfilled. For this purpose the property will be surveyed by one or more members of the Committee, and such survey is to be made at least every third year. If there are found essential defects as to the property or the way in which it is maintained, the owner must remedy such defects within a specified time appointed by the Committee. If the owner disobeys its injunction, the Committee must report the case to the Agricultural Secretary, who will then decide upon the proceedings to be taken against the borrower, in accordance with the stipulations set out in the mortgage-bonds.

### § 19

The owner is bound to keep insured against fire, and at their full value, not only the buildings belonging to the property, but also the live and dead stock, as well as all his other belongings. The insurance on the real property must be effected with some insurance company acknowledged by the State. On the occasions of their surveys of the property, the Committee will also make sure that this obligation is fulfilled.

### § 20

The property must not be divided, amalgamated with other lands, or exchanged against other lands without the special consent of the Agricultural Secretary, which consent can only be given if the application is endorsed by the Parish Council.

Permission as to such divisions may be granted when public or economic needs, the building necessities of the community, or the like, make it desirable that the said houseman's holding, in whole or in part, should be used in some other way.

Permission to consolidate the property with other lands may be granted when circumstances justify compliance

with the owner's wish to extend his business, and the whole property is then to be considered as, and noted as, one houseman's holding.

Permission to exchange one houseman's holding, in whole or in part, for some other lot, may be granted when such exchange will result in the creation of a more prosperous holding. If exchange with another plot is desired in order to free a houseman's holding from the obligations imposed upon it under this Act, it must be demonstrated that the lot on which the future obligations of a houseman's holding will rest is as good and as fit for its purpose as the lot which it is desired to free from those obligations.

The conditions as to the apportionment of the debt to the Treasury on account of the division, amalgamation, or exchange of buildings are to be determined by the Agricultural Secretary on the report of the County Committee.

### § 21

Should an owner desire to transfer his property to some other person during his lifetime, the purchaser can only fill the seller's place in relation to his obligations to the Treasury if he fulfils the conditions set out in §§ 2 and 3. If, however, the owner desires to transfer his property to a son or a son-in-law or a grandchild, the conditions mentioned in § 3, under *a*, *b*, *c*, *g*, and *h*, may be set aside.

The transfer of the property to a person who does not fulfil the above conditions is only allowable when the debt to the Treasury is redeemed at the same time. The property is not, however, set free by such transfer from the special obligations resting upon it as a houseman's holding under the present Act, and especially does it continue to be subject to the regulations set out in § 20.

By transfer of the property under these provisions, the advantages granted in § 15 are to apply to mortgage-bonds in favour of the Kongeriget Danmarks Hypotek-bank.

## § 22

In the event of the death of the owner, his widow may take his place in relation to the Treasury should she remain the possessor of the property.

If the widow marries again, the relation to the Treasury can only be continued if the husband fulfils the conditions stated before in § 3, *literæ c, d, and f*.

The same rule will obtain if some other woman who is the owner of a "Statshus" (State-house) marries. In case of a marriage taking place between two possessors of housemen's holdings subject to State loans, the loan advanced on one of the holdings must, as the Agricultural Secretary may decide, be wound up within one year of the date of the marriage.

## § 23

The rules in force under the Royal Ordinance of May 13, 1769, § 5, and later regulations as to the rights of freeholders in the matter of the making of wills, are also to apply to testamentary dispositions concerning the houses and their belongings described in this Act. If the right of appointment is used for the benefit of one of the children, the person who, according to the testamentary dispositions of the houseman and his wife, is to inherit the house and land, may take the testator's place in relation to the Treasury, if he, to whose benefit the right of appointment is exercised, or, if she be a married daughter, her husband fulfils the conditions set out above in § 3, *literæ c, d, and f*, but only if the sum which the heir has to pay to the estate of the deceased and to the coheirs in consideration of his taking over the property with its belongings, has not been designated at a higher total in the will than the sum which has been refunded by the testator as part payment of his debt up to that day when the succession took place.

If the person who is to take over the property does not possess sufficient money to cover the amount which he

has to pay the coheirs, these may obtain security on the property as a second charge after that due to the Treasury, on the condition of their submitting to reasonable terms, sanctioned by the County Committee, as to the payment of interest and instalments.

If the deceased has children who fulfil the appointed conditions, the above-mentioned right of disposition can only be exercised in favour of one of these heirs.

### § 24

If the person to whom the property has been bequeathed in accordance with § 23 does not desire to take it over, or if no appointment has been made in a will to that end, one of the heirs who fulfils the conditions stated in § 23, and who comes to an agreement with the coheirs as to the taking over of the property, may take the place of the deceased in his obligations to the Treasury.

If the property is sold, the Agricultural Secretary may allow the buyer, if he fulfils the conditions stipulated in §§ 2 and 3, to take the place of the deceased in his obligations to the Treasury.

### § 25

Should the Treasury, after having distrained, put up the property for sale, the same may be sold free from the restrictions stated in this Act as to its disposal, in which case the Finance Minister will decide whether, and on which conditions, any part of the securities of the Treasury and the State Loan Fund may remain as an obligation on the property.

### § 26

This Act, which does not apply to the Faroe Islands, is in substitution of the Act for the creation of holdings for agricultural labourers of April 22, 1904, and therefore the period of five years mentioned in § 27 is to be reckoned from April 1, 1910.

With reference to the housemen's holdings established in accordance with the Act of March 24, 1899, the regulations in §§ 10, 12, and 14-24 are still to remain in force. The regulations in this Act, § 20, 3rd piece, are also to apply to these holdings.

As to the holdings established in accordance with the Act of April 22, 1904, the regulations in §§ 10, 12, and 14-24 are to remain in force.

### § 27

This Act is to be revised in the session of Parliament of 1913-14. Should such revision not result either in a prolongation of the Act or in the enactment of a new Act, the regulations in §§ 2-9, 11, and 15 will become null and void.



## APPENDIX C

### A LAW ORDERING THE DESTRUCTION OF RATS WITHIN THE KINGDOM OF DENMARK

WE, FREDERICK VIII., by the Grace of God, King of Denmark, of the Wends and Goths, Duke of Sleswick, Holstein, Stormarn, Ditmarsh, Lauenborg and Oldenborg: MAKE KNOWN:

The Riksdag has resolved and We have given Our consent to the Law, as follows:—

1. When an Association constituted for the purpose of effecting the systematic destruction of rats has proved to the satisfaction of the Minister of the Interior that it is in a position to expend on the furtherance of its objects, within a period of three years, a sum of not less than 10,000 kroner per annum, it shall become incumbent upon each local authority to make suitable arrangements at the expense of the local funds, and commencing with a date to be made known hereafter by the Minister of the Interior, for the reception and the destruction of all rats killed within the district of such authority and delivered up to such authority.

For each rat delivered up each local authority shall pay a premium, for the payment of which an annual grant shall be made out of the local funds, which shall be not less than three kroner per each hundred inhabitants within the district of each local authority, according to the then last general census.

The State shall make for a period of three years an annual grant of 30,000 kroner, of which one-third may be expended on scientific experiments with preparations

for the extermination of rats, under the control of, and in consultation with, the Royal Veterinary and Agricultural College, whilst the remainder shall be expended on purchasing preparations for the extermination of rats, which shall be either employed on or in public lands or buildings, or out of which remainder grants may be made to associations towards the purchase of such preparations, in a manner to be defined hereafter by the Minister of the Interior.

2. Each local authority shall fix the amount of the premium (Section 1), which shall not, however, be more than 10 öre or less than 5 öre.

Instructions for the collection and destruction of the rats killed will be issued by the Minister of the Interior.

3. The Association cited in Section 1 shall submit for the sanction by the Minister of the Interior at the beginning of each year a plan showing the proposed expenditure, and at the end of each year an account of the money expended by it, together with statistics obtained by it showing the expenditure on premiums made by each local authority.

4. Where the proprietor or occupier of a messuage has participated in the grant to be made by the State (Section 1), he shall not deliver up, or cause to be delivered up, for the purpose of obtaining a premium or premiums, rats killed within the said messuage, until the expiration of one month from the employment of such preparation for which such grant has been made. Any person acting in contravention of this Section shall be liable to a penalty of 100 to 500 kroner.

5. Any person who preserves or breeds rats or imports rats from abroad, in order to obtain premiums or enable another person to obtain them, shall be liable to a penalty of 100 to 500 kroner, unless he is liable to a higher penalty under the Common Law. A person who shall deliver up rats knowing them to have been preserved, bred, or imported for the purpose of obtaining a premium shall be liable to the same penalties.

All proceedings under this Act shall be taken in a public Police Court, the fines to go to the special funds provided by this Act, or where such fund does not exist, to the public funds of such local authority.

Any person delivering up rats to any other local authority than to that within the district of which they have been caught shall be liable to a penalty not exceeding 100 kroner.

This Act shall come into operation on a date to be fixed hereafter by the Minister of the Interior and remain in operation for three years.

In the Session of the Riksdag immediately preceding the expiration of this Law a vote shall be taken for the renewal or revision of this Law.<sup>1</sup>

The Government is authorised by Royal Rescript to make such alterations in the operations of this Law within the Faroe Islands as may be considered most suitable, having regard to the special conditions obtaining within those islands.

Given at Amalienborg, the twenty-second of March,  
Nineteen Hundred and Seven.

Under Our Royal Hand and Seal,  
FREDERICK R.,  
SIGURD BERG.

### CIRCULAR TO THE LOCAL AUTHORITIES

WHEREAS the "Association for the Authorised Extermination of Rats" has proved to the satisfaction of the Ministry of the Interior that it is in a position to expend on the furtherance of its objects not less than 10,000 kroner within a period of three years, it is hereby requested, in pursuance of Act No. 59, of the twenty-second March, Nineteen Hundred and Seven (see Public Notice dated this day) and commencing with the first day of

<sup>1</sup> This Law has, I am informed, been recently re-enacted by the Danish Parliament with some alterations.—H. R. H.

July of this year each local authority shall at its own expense take all such measures as may be necessary for the reception and destruction of all rats killed within the district of such authority and delivered up to it. For the purpose of paying a premium for each rat delivered up each local authority shall out of the common funds make an annual grant which shall be not less than three kroner for each hundred inhabitants, according to the then last general census, should the amount required for the payment of premiums make such grant necessary. It shall be left to each local authority to decide whether further grants shall be made towards this purpose. The premium to be paid for each rat delivered up shall not be more than 10 öre or less than 5 öre, and shall be fixed by each local authority, which shall give due and sufficient notice both of the date fixed for the commencement of the operations of the Law and the premium to be paid. As far as possible, a uniform rate of payment by premium shall be fixed by local authorities within the same county. Rats may not be delivered up to any local authority but to that within the district of which they have been caught ; any person acting in contravention (Paragraph 5 of the aforementioned Law) shall be liable to a penalty not exceeding 100 kroner.

The Chairman of the Councils of the various local authorities are hereby requested to take steps for the discussion and carrying out of the provisions of this Law.

If the grant made by any local authority for the purposes of this Law should prove insufficient for the payment of premiums on all rats delivered up, such authority may apply to the "Association for the Authorised Extermination of Rats," Colbjørnsengade 14, Copenhagen B, for a subsidy, this Association having undertaken to organise the obtaining of voluntary subscriptions for the carrying out of the purposes of this Act.

The said Association is further prepared, at the request of local authorities, to render expert assistance in commencing and carrying through operations under this Act.

For the collection and destruction of rats killed the Ministry of the Interior issues the following instructions :

#### A.—THE LARGER TOWNS

*Collecting Depots.*—The local authorities shall provide a sufficient number of places suitable for collecting depots. Such depots must not be within any place where food or clothing is made or offered for sale. Fire-brigade stations are considered most suitable for collecting depots.

The collecting may suitably be done in the manner that for each depot a number of receptacles are provided, made of galvanised iron and furnished with a tight-fitting lid. Into these receptacles the rats are to be thrown after their tails have been cut off. The tails are to be kept in a separate tin box. All receptacles and boxes are to be collected daily and to be replaced by empty receptacles. The full receptacles are to be taken to the place where the destruction of the rats is effected.

Further advice on the purchase of such receptacles and the apparatus for cutting off their tails will be given by the Association for the Authorised Extermination of Rats at the request of a local authority.

The destruction may be effected either by cremating the dead rats—for instance at the municipal gasworks—or by burying the carcasses in the open, at a sufficient distance from the town, unless this course is prohibited by local sanitary considerations. It is recommended that the local authority act in this manner always with the local Health Committee.

#### B.—THE SMALLER TOWNS

Instead of opening a fixed depot, it would appear more suitable in the smaller towns to provide a collecting cart. Any horse-drawn vehicle would serve the purpose as long as it is furnished with a fixed apparatus for cutting off the tails and a receptacle of galvanised iron for receiv-

ing the carcasses of the rats. The vehicle should also be fitted with a bell, to announce the arrival and presence of the collecting cart.

The destruction of the carcasses is to be effected in the manner described under *A*.

### C.—THE VILLAGES

The authorities in the villages shall appoint a suitable person to receive the rats delivered up, for which work he shall be paid an adequate remuneration. Such persons must be supplied with an apparatus for cutting off the tails of rats handed in. After the tails have been cut off, the rats may be buried in a suitable place without delay. It is most undesirable that any person engaged in the carrying of milk or other food-stuffs be asked to convey rats to the persons appointed to receive them. Villages in close proximity to towns are advised to make arrangements for the cremation of the rats at the municipal gasworks.

In the case of villages whose buildings approximate those of a town, it is recommended that the regulations given for towns are adopted.

Respecting the payment of the premiums it is recommended that the person in charge of a collecting depot or otherwise appointed to receive rats is supplied with a fixed amount of petty cash, out of which he pays the premium for each rat delivered up. The tails cut from the rats serve as a receipt for the payment made, so that the total amount of tails will be a discharge for the total amount of petty cash received and paid out in premiums.

In order to prevent abuse, it is particularly requested that the local authorities take care that the rat tails are destroyed in an efficient manner as soon as they have served the purposes of control and checking.

For the purpose of keeping satisfactory accounts, the Association for the Authorised Extermination of Rats has

on sale specially arranged account-books which are recommended by the Ministry of the Interior.

As in accordance with Paragraph 3 of the Law of 22nd March 1907, it is the duty of the Association for the Authorised Extermination of Rats to submit to the Ministry of the Interior a Report on the money expended in the whole of the kingdom on such premiums, the local authorities are hereby desired to make a quarterly Return to the aforementioned Association on the number of rats killed within the district of each authority in each month of the quarter covered by such Return, and on the money paid out for premiums. Forms for such Returns will be supplied by the Association.

Any associations which in accordance with terms of Paragraph 1 of the Law of 22nd March 1907 desire to participate in the grant made by the State for the purpose of purchasing preparations for the extermination of rats (Ratin, &c.) must send a request to that effect to the Minister of the Interior, together with a statement showing the approximate cost of the proposed campaign, and the amount at the disposal of the association for that purpose. As this Law is essentially of an experimental character, the requests of all such associations will be treated as preferential which show that the proposed extermination may be easily and successfully effected (as for instance on small islands).

A number of copies of this circular will be forwarded to each local authority.

MINISTRY OF THE INTERIOR,

COPENHAGEN, *1st May 1907,*

SIGURD BERG,

II. VEDEL,

## APPENDIX D

### THE LOANS FROM THE STATE.—CHEAP MONEY AND ITS ABUSE

*Article from the "Jyllandsposten," Friday, November 4, 1910*

#### THE SMALL-HOLDINGS BILL

THERE has happened in the case of the Small-holdings Act and similar Cheap-loans Acts what has chanced to so many other sound and good ideas: they have been swallowed in political agitation. For many, many years we have witnessed an eager race for the housemen's votes. The programmes of the parties made the housemen their pets, and a violent agitation was begun in order to satisfy that class of the population. Twenty years have already passed since the Conservative programme spoke of the necessity of doing something to make it easier for the agricultural worker to acquire a house of his own with a suitable parcel of land. In 1895 the "Left" party made a higher bid by demanding the parcelling-out of land for housemen's holdings, and even the "Agrarforeningen" (the Agricultural Society) thought fit to require that the number of small-holdings should be kept up and even augmented. But so many good wishes in a mass, carried under competition of an eager agitation, ran the risk of resulting in hurried work, and they did not "claw off the shore."

After the political reconciliation in 1894 an Agricultural Committee was appointed, and one of its objects was to find out how it was possible to create cheap holdings on favourable terms for the benefit of agricultural labourers. Two years later the said Committee issued a



copious and comprehensive report, and a proposal for the establishment of holdings for agricultural workers was formulated and brought before the Folkething (the House of Commons) on the 10th December 1896 by the Agricultural Secretary, Mr. Sehested. The main point of this proposal was that the State should enable the agricultural labourer to become the possessor of land by providing him with cheap loans. In order to obtain the loan, however, the agricultural labourer had to be the possessor of one-fifth of the value of the property concerned, and the size of the lot was fixed at 3 to 4 tøndeland of average quality. The Treasury might lend 1,300,000 kroner yearly in five years, and the loans were to carry interest at the rate of  $3\frac{1}{2}$  per cent.

This proposal, considered as an experiment, may be said to offer good terms to the borrower. But it did not find any encouragement in the Folkething, as the agitators had promised the people much more. The "Left" majority demanded that the yearly sum should be raised to four million kroner, and the interest be fixed at only 3 per cent., and, finally, that the borrower's own capital need only amount to one-tenth of the value of the property. A "Left" minority wished to go still further, but it could not compete with the Socialists, who offered six to seven million kroner yearly at an interest of 2 per cent., and at the same time demanded that all land belonging to parsonages (glebes) should be seized for the purpose of joint-farming experiments. The result was that the Folkething carried the proposal of the majority and sent it to the Landsting (the Upper House).

It is quite instructive to follow the proposal on its further way and to observe how the more sober legislators allowed themselves to be dragged from one position to the next by the agitators. On the main points the Landsting adhered to the Government proposal, and the Agricultural Secretary declared that his intercession between the Houses would be quite useless if the Folkething held to its views. But when the scheme had wandered to and

fro between the Houses, and had passed the joint-committee and, finally, been declared an Act of Parliament in March 1899, then the Folkething had won the battle.

A short comparison of the rival schemes will suffice :

The Government proposed that the agricultural labourer should possess one-fifth of the value of the property, but the Folkething insisted that the amount should be reduced to one-tenth—and won! The Government proposed that interest should be paid on the loan at the rate of  $3\frac{1}{2}$  per cent., but the Folkething would only accept 3 per cent.—and they got it! It was further added that one-half of the loan is not to be repaid until the other half, on which interest and repayment amounts to 4 per cent. per annum, has been paid back in the course of forty-seven years. Subsequently the remaining debt is to be repaid in about sixty-five years, with interest of  $3\frac{1}{2}$  per cent. yearly, out of which 3 per cent. is to be considered as interest, and no part-payment is demanded during the first five years. The only concession of the Folkething was to limit the yearly sum advanced to two million kroner instead of four million kroner. But in compensation the Folkething took care to make the control over the administration of the Bill less effective than was first proposed, and the House also made the conditions of transfer easier.

The Act was to remain in force for five years, and already during that time unfavourable results and evasions of the Act appeared owing to the deficient composition (query, faulty drafting) and the ineffectual control over the expenditure of the moneys advanced. This was acknowledged by our worthy legislators, who tried to strengthen the control when the Bill was revised in 1903–1904. Thus it was made a new condition of obtaining a State loan that the borrower should not only prove that he had the command of an amount corresponding to one-tenth of the value of the property, but also that he was really *the owner* of such a sum, and it was also made a condition that no man could become the owner of a State-holding by pur-

chase from his own resources. It was further agreed that those who certified the qualifications of a petitioner should hold a certificate from a magistrate as to their credibility, and the Committee were ordered to inspect the lots it was proposed to purchase before they promised a State loan to any petitioner.

The reader will see that these new conditions show the speculation that had begun by the aid of these cheap loans, but the worthy law-givers left quite out of consideration the economic side of the matter, which there had been every reason to examine a little more closely. They altered some of the conditions, it is true, but in the wrong way. The yearly loan limit was raised from two to three million kroner, and at the same time they extended the benefit of the loans to "garden workers" and craftsmen, ranked economically as agricultural workers, also to brickmakers and others who in part earn their living by agricultural labour.

After this there was nothing to prevent loans from being granted to people who had not a sufficiently thorough training to enable them to manage a house-man's holding. One might conclude that the legislators followed the old and obsolete rule—that when a man is not fit for anything else he can at any rate become a farmer.

Another period of five years was necessary before the legislators observed this lapse, but when the Bill was revised during the session 1908–1909 the above-mentioned enlarged right to loans was also done away with. The Agricultural Secretary even demanded that there should be six years of preliminary experience on the part of the applicant. But the result was that this period was limited to "at least four years after the attained eighteenth year of the petitioner." Women and fishermen were admitted, the yearly loan limit was increased to four million kroner, and the existing possessors of small-holdings were enabled to obtain additional loans.

## SMALL-HOLDINGS.

[By way of a pendant to the views set out in the above article, I add a memorandum just received by me, conceived in a very different spirit, which Mr. Pedersen-Nyskov, of whom I have spoken elsewhere in these pages, has kindly written for my information.—H. R. H.]

*March 8, 1911.*

The labourer question was one of the most important problems of the past, and will be that of the future.

I am quite ready to admit that the duty incumbent more or less on all of us, *i.e.* to bring up a capable, right-thinking, and loyal race, will, if it succeeds, be of the most paramount importance for the future happiness and welfare of our people ; but the introduction of good social conditions would facilitate this task, and ought, therefore, not to be neglected.

Is there a single individual who is not willing to provide for his nearest relations in such a manner that they can live as comfortably as possible ? If people are imbued with sympathy their views are broadened, they work on a larger basis, and the habit of improving the conditions of others is fostered in them.

The Liberals have begun to solve this problem with no little success. Considerably larger grants have been allowed for the advancement of instruction of the people and for technical instruction, and attempts have been made to better the conditions of the poor. I am thinking of the laws concerning the superannuation fund, sick-clubs, relief fund, relief fund for out-of-works, insurance against accidents, treatment of sick people, and support of children, building loans for workmen, loans to fishermen and mechanics ; besides which large sums have been spent for the advancement of industries, fishing ports, &c., and the laws governing the establishment of small-holdings is only one link in this chain of social reforms. This law will undoubtedly

prove to be of the greatest importance to others than ordinary farm labourers.

The question as to how land could be obtained for farm labourers formed a subject for proposals and discussion for many years. Vilhelm Lassen (deceased Minister of Finances) in particular greatly advocated this matter, both in his paper and in his book on "Public Leases," and if the matter as put into practice turned out somewhat differently to his expectations, it was certainly no disappointment to him, for it was not the form he looked upon as the principal point, but the contents.

In 1894 a committee was appointed to consider this question, and gave in two years later its report and proposal, which formed the basis for the negotiations of the ensuing two years of futile attempts to bring about an understanding between the two Houses. The law of March 24, 1899, was at last passed. Upon this law were founded the laws passed later regarding the same matter, viz. the laws of April 22, 1904, and of April 30, 1909. Many important alterations, however, have been made since then.

The right of putting into force the law which originally only concerned farm labourers proper has little by little been extended to comprise country mechanics, artisans, &c., who partly earn their livings by agricultural and horticultural labour, as well as others who have supported themselves for at least four years after attaining their eighteenth year.

The loan value of property, which originally was 4000 kroner, was increased in 1904 to 5000 kroner, is now 6500 kroner, and can go up to 8000 kroner when the price of land in the neighbourhood is particularly high, and nine-tenths of these sums can be borrowed by the farmers at 3 per cent. The annual grant from the exchequer was in the first law fixed at 2,000,000 kroner, increased in 1904 to 3,000,000 kroner, and is now 4,000,000 kroner annually, and a further quarter million kroner as loan in "lease-houses," which

become private property. The last law provides for an extra loan for extending the land and the buildings of those who have been furnished with loans in accordance with the laws of 1899 and 1904 respectively, up to 2100 kroner and 1400 kroner. The arrangement for loans at a low rate, conveyance at 1 krone, bonds free of stamp duty, and free registration or filing, &c., have been introduced into all the laws to which I refer in this connection.

The question now is: "How has the law turned out in practice?" Those who wish to know must look into the matter for themselves, and not seek information from those who spy out isolated unfortunate cases or seek it in the Copenhagen dailies, which state that we live in hysterical, idiotic times, in which the watchword is "Help for the wooden-shod small farmer," and say at the same time that it is the farmers' law that increases the price of land.

When the last bill was put forward in 1908 it was announced that in 1900-1 to 1907-8, 3820 small farms had been started on which 15,172,634 kroner had been lent. This number of farms is not one in every other commune per annum. It takes a special Copenhagen agricultural expert to understand how this could turn the prices of land upside down, and the fact that the Government's loss in these eight years was only 6878 kroner does not tend to prove the forecast of those who prophesied that the public exchequer would suffer a great loss.

It must be remembered that those now in possession of one of these farms would hardly ever have obtained one had it not been for these laws, and the advantage the farms have for the owners and their children—giving them as they do their own land to work upon—will be shown in future which will give us no cause to cease what we have begun.

It has been a cause of great joy to those connected with the matter to see how capable farmers have utilised

this law, to see the land continually yield larger and better profits, to see the stock improved and increased. I must here state an example from the Province of Randers to show how the stock increases in the course of a few years:—

The appraisement of 107 farms in 1902 gave a total of 9 horses, 210 cows, 7 head of young cattle, 71 sheep, and 192 pigs.

The inspection of 107 farms in 1905 gave 44 horses, 250 cows, 77 head of young cattle, 18 sheep, and 226 pigs.

The inspection of 107 farms in 1908 gave 80 horses, 295 cows, 98 head of young cattle, 22 sheep, and 300 pigs.

These figures are for farms started in accordance with the law of 1899, with a loan value of 4000 kroner and loan of 3600 kroner.

Here is another example in accordance with the law of 1904, with a loan value of 5000 kroner and a loan of 4500 kroner:—

The appraisement of 137 farms in 1905 gave a total of 58 horses, 332 cows, 45 head of young cattle, 39 sheep, and 350 pigs.

The inspection of 137 farms in 1908 gave 132 horses, 430 cows, 181 head of young cattle, 27 sheep, and 481 pigs.

These results are not exceptional; every year shows similar progress.

It is said in certain quarters that it is very unreasonable that so much money should be spent at a period when the financial position is so bad. It must, however, be remembered that only a loss of interest comes into consideration, and here is a question which ought to be looked into: "Are there not different objects on which money is spent which it would be better to save?" I believe there are, and I also believe that the sacrifices made by the community in this end will be made good.

We have now attained to that independent small farm-

ing which so many longed for in order to reach a position in which they could earn their livings ; this is of importance in that it diminishes the expenses of State and commune as regards the support of aged people, sick people, &c. It is more likely to bring up a healthy and capable youth than if people had to spend all their lives in a house without land, or as out-of-work town labourers. That the conditions of the community should be arranged in such a manner that the feeling of independence is retained by as many people as possible is a matter of national honour and welfare which cannot be upset by momentary financial difficulties.



# APPENDIX E

## PUBLIC ELEMENTARY EDUCATION IN DENMARK

*From a memorandum supplied by Mr. Jerndorff Jessen*

A CHILD in Denmark must go to school when it has completed its seventh year, but if the parents so desire it may be admitted at the age of six. Its education ceases on the 1st April or the 1st October in the school term after it has attained its fourteenth year. Parents are allowed to educate their children either at private schools or at home, provided that, on examination before the local School Commission, such children can prove that they are equally advanced in knowledge as are children of a like age in the State schools.

In the country districts 89 per cent. of the children receive instruction in the public or State schools. In Copenhagen 77 per cent. and in the other towns 70 per cent. receive such instruction. During the last thirty years the number of children who are privately instructed has increased in the country districts, but in the capital (Copenhagen and Frederiksberg) and in the larger towns it has decreased. This is due to the fact that the working classes have multiplied to a greater extent than the middle classes, and that as the public or State schools have been improved, the middle classes send their children to them more than they used to do.

The evolution of Denmark has so worked that the public school is under the authority of the Government, the Church, and the commune or parish; but of these three the last has the greatest interest, and one which is continually growing. Each parish is, as a rule, divided

into several school districts connected with one school. The School Department of the commune is, in the country, directed by a Parish Council, and in the town by the Town Council. The more particular management, however, lies in the hands of the School Commission, consisting of the minister of the parish and members chosen by or from the members of the Parish Council. Of this Commission, widows whose children must attend school may be chosen as members. In the towns the Commission elects its chairman, but in the country the minister is the chairman *ex officio*. Generally the Commission consists of five members. In Copenhagen and most of the towns the management and certain duties of inspection are entrusted to the Head-master. The management authority, however, varies in the different communes.

In Copenhagen, and in each of the seventy-three deaneries into which Denmark is divided, there exist Boards of Education. In Copenhagen this Board consists of the High Bailiff, a Mayor, and a Dean. In other places it consists of the Head Magistrate, the Dean of the district, and a third member chosen by the full Council. These Boards have the entire supervision of the public schools, which are periodically visited by the Dean, who inspects them and ascertains the extent of their educational efficiency.

The Church and School Department of the Government has the general supervision of State education. It lays down the system which is to be followed, prescribes what salaries are to be paid to the teachers and under what circumstances they may be dismissed, and interprets the provisions of the Code of Education as may seem expedient according to the circumstances of particular localities. This Department is advised by a practical educationalist. In certain cases, however, the Department accepts as final the advice of the Bishops, who have authority over public education and the teachers concerned therein. The Department receives annual reports from the School Board

as to the condition of the schools, and also from the Bishops and Deans after their visitations.

In addition to the ordinary public schools, which admit all children without fees and are called "free" schools, there exist in Copenhagen and most of the Danish towns other public schools in which the pupils pay and receive a higher education. These schools are called "payment" schools, secondary schools, and municipal high schools. Copenhagen has twenty-four free schools and twelve payment schools. In the latter the fees demanded are very low, only one krone (? per week). Of late years many towns have instituted secondary schools, in which either no fees are demanded or such fees are only payable by the pupils in the highest class, or only from certain pupils in each class.

In addition to the secondary schools that give higher instruction there exist, especially in the country districts, about two hundred private schools where the teaching given does not go beyond that furnished in the common public schools. Most of these have been instituted by adherents of the *Grundtvig* movement, who have also founded most of the High Schools, such as Askov, or by religious sects that do not belong to the State Church. These schools receive subventions from the Government and also from certain of the big communes. With the exception of Copenhagen, any individual may teach privately or set up a private school without having passed an examination as to efficiency, and without receiving any pecuniary allowance from the educational authorities. While the number of pupils attending a country school is in most cases under 100, in the towns it reaches to about 1000, and in Copenhagen to over 1500. The result is that the various schools are divided into classes, but these differ greatly in their number. In the country districts there are, as a rule, but two or three classes, in the towns 13, and in Copenhagen as many as 43. The average number of pupils in each class must not now exceed 37 in the country and 35 in

the town. In each common school, with the exception of a few in the moorland district of Jutland, the pupils are divided into at least two classes—one for the elder and one for the younger children.

In the towns the number of classes is generally six. This is also the arrangement in Copenhagen and Frederiksberg, but in these cities there is further a superior class of pupils who have passed the usual school standards. Also there exists what are known as "help" classes for backward children.

In the country districts boys and girls generally attend the same class. In the towns, however, this only happens in one-fifth of the classes, and in Copenhagen but very rarely.

In the public schools of Copenhagen all the children attend school either in the morning or the afternoon on every weekday, the attendance averaging from twenty-four to thirty-six hours a week. The same is the case in the free schools of other towns, though the average number of hours of attendance demanded is less. In the "payment" schools, except those of Copenhagen, the general rule is that the pupil must attend every day, such attendance amounting to a maximum of thirty-six hours a week.

In Frederiksberg and some other towns the whole-day attendance is a matter of choice. If a pupil, however, stays away from school without good reason for his or her absence, he or she is penalised by being transferred to a half-day school. In the country different classes of pupils attend school for the whole day or from five to six hours in rotation. In what are called the Islands, it is usual for the various classes to attend school for three days a week. In Jutland, however, owing to the necessities of agricultural work, the custom is to arrange that the older classes should attend on many more days in the winter than in summer, whilst the younger children who are not employed in the fields reverse this order of attendance.

The various communes are allowed to regulate their

times of school attendance in accordance with the conditions that prevail locally. The rule here is, however, that every class must receive instruction for forty-one school weeks, averaging at least eighteen hours per week. This is exclusive of the time occupied in gymnastics, needlework, &c. In the towns at least twenty-one hours' instruction must be given per week, exclusive of these extra subjects, and of drawing and cookery.

As the public becomes more convinced of the necessity of education, year by year the average non-attendance at school is lessened. The chief reasons of this non-attendance are the pecuniary advantage to parents that result from the labour of the children in manufactories in the city, and in field work on the land. Under the laws of 1873 and 1901, however, the employment of children in manufactories has been limited to the extent that they are not allowed to undertake such work until they have reached the age of thirteen. Also the Home Department, upon application from the Town Councils, has power to enforce certain additional regulations as to this matter.

When allowance is made for absences caused by illness, the non-attendance rate in the country school is 5 per cent. of the school days. In the town it is from 1 to 2 per cent., and in Copenhagen and Frederiksberg no more than  $\frac{1}{2}$  per cent.

The compulsory subjects of instruction in the public schools are as follows:—Reading, grammar, religion, writing, arithmetic, history, geography, singing, and, for boys, gymnastics. To this list drawing is added in the towns, and, in the case of girls, gymnastics and needlework. In such country schools as employ a lady teacher, the girl pupils must also be instructed in needlework; but this rule is only enforced in 20 per cent. of such schools. Optional subjects are natural history and "Slöjd" in all schools, and for girls gymnastics; also housewifery, mathematics, and foreign languages. These two last subjects are taught in all the "payment" schools, as will

shortly be the case in the communal secondary schools. Physics and physiology are taught in the town free schools, but only exceptionally in those in the country districts.

Teachers are allowed great latitude as regards the exact methods of imparting knowledge, a point upon which no general rules are laid down. The Danish teacher does not favour any particular stereotyped method of imparting information; he trusts to his own individuality and that of his pupil. The weak point of such a system is its lack of uniformity; also the teaching is apt to become too sketchy and conversational, not leaving enough to the effort of the pupil's mind.

Children do not now have the advantage of as much home-training and instruction as was formerly the case either in the towns or in the country districts, although, speaking generally, more interest is now taken in school work in the rural districts.

Corporal punishment is rarer than it used to be, and on the whole the relations between teacher and pupil are more cordial than were common in former days.

In several of the large communes prizes are given to those children, on their leaving school, who have made the most attendances and been the best behaved. In the country districts there are examinations in spring and autumn, but in most of the towns such examinations are only held once a year.

The communes furnish books, &c., to be used in the schools, but poor children are also supplied with these for home use. In the larger towns the schools are well supplied with all necessities, but in many of the communes much parsimony is shown in this respect. In Copenhagen, Frederiksberg, and several other cities, the communes furnish libraries both for the teachers and for the scholars, but in the rural parts of Denmark there are few of these. They will, however, certainly increase in the future, as the Government has voted a subsidy for the support of such libraries.

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# HOUR-PLAN FOR THE FREE AND PAYMENT SCHOOLS IN COPENHAGEN

## Boys

Class.	Religion.	Reading and Grammar.	Writing.	Arithmetic.	"Intuitive" Instruction.	History.	Geography.	Natural History.	Physics.	German Language.	Instruction in Book-keeping.	Singing.	Drawing.	Gymnastics.	"Sloyd."	Total Hours per Week.
1	2	10	3	5	2	..	..	..	..	..	..	..	..	2	..	24
2	2	9	3	5	3	..	..	..	..	..	..	1	..	2	..	27
3	3	9	3	5	..	..	..	1	..	..	..	1	..	2	..	30
4	3	9	3	5	..	..	..	..	..	..	..	1	..	2	..	30
5	3	9	3	4	..	..	..	..	..	..	..	1	..	4	..	30
6	2	7	3	4	..	..	..	..	..	..	..	1	..	4	..	30
7	2	6	1	4	..	..	1	1	..	4	..	1	..	4	..	30
Top Class	2	5	..	4	..	2	1	..	2	5	2	..	4	3	(5)	30

## Girls

Class.	Religion.	Reading and Grammar.	Writing.	Arithmetic.	"Intuitive" Instruction.	History.	Geography.	Natural History.	Physics.	German Language.	Singing.	Gymnastics.	Needlework.	Cookery.	Total Hours per Week.
1	2	9	3	4	2	..	..	..	..	..	..	..	4	..	24
2	2	8	2	5	3	..	..	..	..	..	1	..	4	..	27
3	3	8	2	5	..	..	..	1	..	..	1	..	4	..	30
4	3	8	2	4	..	..	..	..	..	..	1	..	4	..	30
5	3	7	2	4	..	..	..	..	..	..	1	3	4	..	30
6	2	6	..	4	..	..	..	..	..	..	1	3	4	..	30
7	2	5	..	4	..	..	1	..	2	6	1	3	4	4	30
Top Class	2	5	..	2	..	2	1	..	2	6	1	3	4	4	30

# HOOR-PLAN FOR THE "WHOLE-DAY" SCHOOLS IN FREDERIKSBURG

## Boys

Religion.	Reading and Grammar.	"Intuitive" Instruction.	Writing.	Arithmetic.	History.	Geography.	Natural History.	Physics.	Drawing.	Singing.	"Sloyd."	Needlework.	Gymnastics.	English or German Language.	Cookery (Voluntary).	Total Hours per Week.	Total Hours per Week in Half-Day Schools.
2	5	...	...	3	2	1	..	2	4	...	2	...	3	6	...	30	30
3	7	...	1	3	3	2	..	3	2	1	3	...	3	...	...	30	30
3	7	...	1	3	3	2	..	3	2	1	3	...	3	...	...	30	30
3	10	...	...	3	2	2	..	...	2	1	...	...	2	...	...	34	27
3	9	...	...	3	2	2	..	...	2	1	...	...	2	...	...	34	27
3	8	...	...	3	2	2	..	...	2	1	...	...	2	...	...	34	27

## Girls

2	5	...	...	2	2	1	...	2	2	...	...	6	2	6	(8)	30	30
3	7	...	1	3	2	2	...	2	2	1	...	6	2	...	(8)	30	30
3	7	...	1	3	2	2	...	2	2	1	...	6	2	...	(8)	30	30
3	10	...	...	3	2	2	...	...	...	1	...	6	2	...	...	34	28
3	9	...	...	4	2	2	...	...	...	1	...	5	2	...	...	34	27
3	8	...	...	4	2	2	...	...	...	1	...	5	2	...	...	34	27
3	6	...	...	4	...	...	...	...	...	...	...	4	2	...	...	24	24

hour-plan will be altered in April 1911. The younger classes will receive on for fewer hours a week, and the elder classes for more hours, and these hours made uniform throughout all the schools.



## APPENDIX F

[In order that any reader who is interested in the reclamation and afforestation of land may inform himself as to what is being done in these directions in Jutland, I print translations of the two following extracts from Danish publications which I think are of value. These extracts have been kindly sent to me by Mr. A. W. Taylor of Copenhagen.—H. R. H.]

### THE DANISH HEATH SOCIETY

*Translated from "Hedeselskabets Virksomhed med særligt Henblik paa Herning-Egnen, 1907." (Viborg.)*

"THE Heath Society was founded in 1866. Its main object is to promote the reclamation of the moors of Jutland. The means used to promote this object are the encouragement of irrigation (*Engvanding*), the planting of trees, the construction of drains, the regulation of rivers, the treatment of bogs and fens with a view to turning them into agricultural land, and the conveyance of marl and chalk to districts which are poor in chalk.

"In 1860 there were in Jutland 808<sup>1</sup> (English) square miles of moor covered with heather, 72 square miles of uncultivated bog, and 40 square miles of barren sandhills—making altogether an area of 920 square miles of uncultivated land.

"In 1896 there were 252 square miles of heather and bog, and 29.6 square miles of barren sandhills—altogether an area of 281.6 square miles of uncultivated land. Later statistics are not as yet available (1907).

<sup>1</sup> One Danish square mile=4 English square miles. The translator has therefore multiplied the figures in the Danish original by four.

"Afforestation is carried out partly by the State, partly by private individuals, under the guidance of the Hedeselskab.

"There are now 1790 plantations with an area of 116,535 tønders<sup>1</sup> of land, of which 72,048 tønders has been recently planted.

"In connection with the plantations there are 52 afforestation societies under the guidance of the Hedeselskab. These societies consist of about 20,000 members, who distributed in 1906 over 16,000,000 plants at half-price to 16,340 small-holders.

"The results of experiments in the cultivation of bog-land are made known throughout the country by means of 500 demonstration stations.

"About 100,000,000 lbs. of marl are conveyed (each year?) to the Jutland heath districts.

"More than 200 (English) miles of irrigation canals have been constructed by the Hedeselskab, and about 40,000 tønders of land have been improved by means of the regulation of the watercourses.

"These important works are carried out partly by means of subsidies from the State, and partly by means of contributions from private individuals. The operations of the Society now extend over the whole of the country.

"There are 4500 members. The yearly subscription is 4 kroner (4s. 6d.). The managing committee consists of Kammerherre Lüttichau (President), Professor Schröder, and M. de Lichtenberg. The Society's principal work is to give *free* advice with regard to the above-mentioned matters, which advice may be obtained from the nearest 'officiant,' of whom there are about fifty in the service of the Society."

<sup>1</sup> One tønner =  $1\frac{1}{2}$  of an English acre.

## A GREAT INCREASE OF TERRITORY IN JUTLAND!—THE REGULATION OF THE RIVER SKALSAA

*Translated from a Danish newspaper of 1907*

“One of the happiest events that we ever have to record is the acquisition of fresh territory within the boundaries of our native land. Barren heaths are brought under cultivation. Useless pools and swamps are turned into pastures and arable land. This means that in the future more men can find a home and earn their daily bread in their own country. Such an increase of territory has taken place during the last two years as a result of the regulation of the course of the river Skalsaa.

“The Skalsaa leaves Lake Tusing at a spot six (English) miles west of Randers. While the river Gudenaa, which is only two miles distant, runs due east, the Skalsaa flows with an almost imperceptible current and after many windings into the Harboek Fjord, one of the southern arms of the Lim Fjord, situated about eight miles north of Viborg. After receiving the water of its tributaries the Skalsaa used to overflow its banks so that the water meadows became sour owing to excess of moisture, and their fertility decreased. About fifteen years ago the Heath Society, one of whose main objects is the drainage of bogs and water meadows, entered into negotiations with the owners. In the course of a few years about 1772 acres were reclaimed as a consequence of the setting up of two bog-draining centres. But it was only after the engineering operations, on a large scale, which began two years ago, had been brought to a close that the valley of the Skalsaa throughout the whole of its length has been turned into arable and pasture land. The method of procedure has been to clean out and deepen the river-bed, and to shorten the river in places where its windings were of excessive length. Its length has been reduced from thirty-one to twenty-four miles, and its surface-level has

been lowered between 2 and 5 feet. During the summer the reduction in height of the surface-level will be seen to be even greater. The width of the river since its regulation is from 25 to 50 feet, its depth from 5 to 8 feet. Its total fall is 34 feet. In the course of operations 38,000 cubic feet of soil were dug up, twenty-seven weirs were constructed, and six bridges were built or repaired. The land reclaimed amounted altogether to 14,664 acres. It was naturally of varying quality, but its increase in value may, without exaggeration, be estimated at about 4,000,000 kroner. As the cost of reclamation only amounted to about 200,000 kroner, the result of the operations must be regarded as most satisfactory. Last summer the value of the meadow-hay harvested on many of the fields equalled the cost of their reclamation. Succeeding harvests will therefore bring a clear profit to the landowner. Smallholders who have been obliged both to work and also to fatten their cattle for the market will be able to grow oats both for sowing in water meadows and on sandy soils, and also for feeding the horses, which they will now be able to buy. The engineer and contractor for the extensive works, which have been carried out so successfully, was M. Franz Lichtenberg, as regards three-quarters of the whole course of the river. The remaining quarter, the part nearest the mouth of the river, was assigned to the engineer, M. Loisl, as the sphere of his activity."

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